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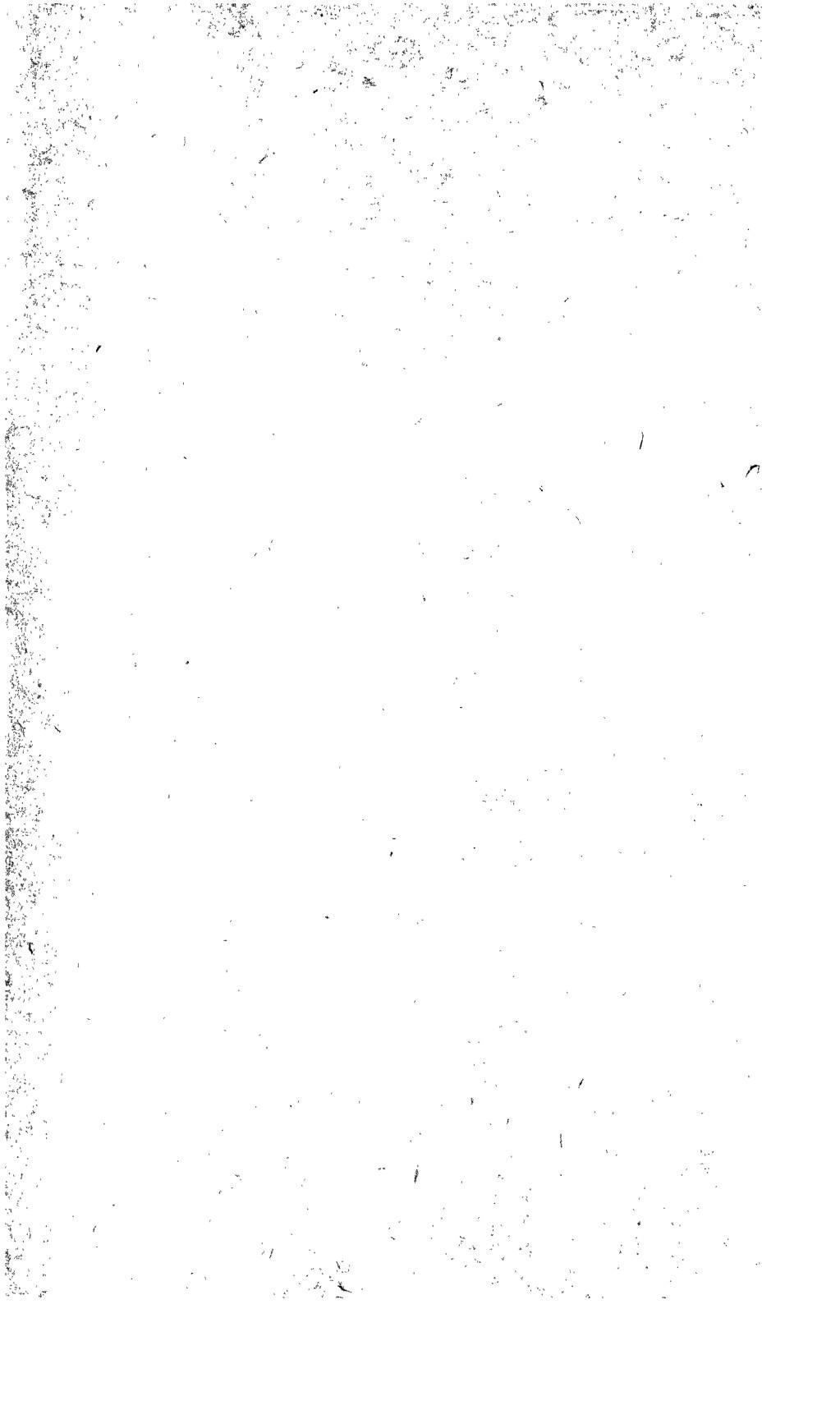
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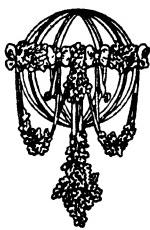
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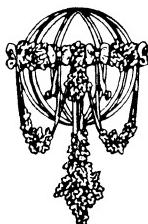
Papers read before the Society
November 18, 1938



Honolulu, Hawaii
Published, March, 1939

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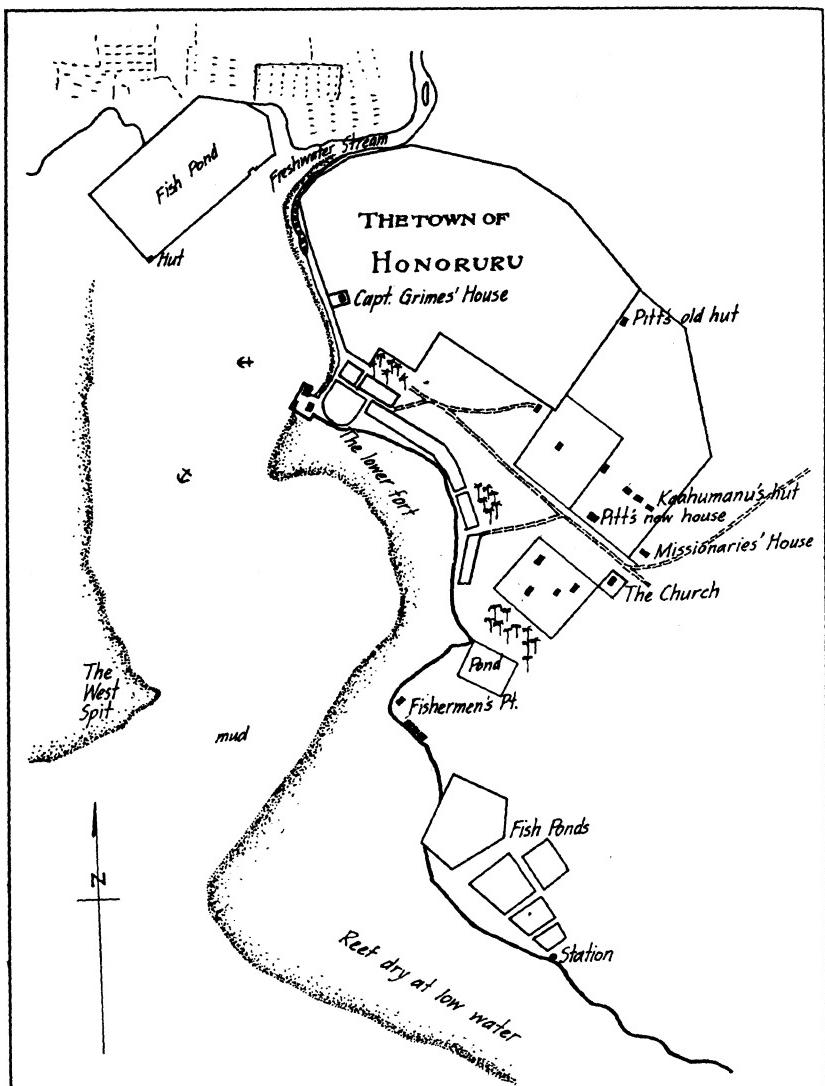


Figure 1. Honolulu in 1825; reproduced from map drawn by Lieut. C. R. Malden of H.B.M.S. *Blonde*, commanded by Lord Byron. The *Blonde* came to Hawaii in 1825, bringing the bodies of Liholiho and his queen, who had died the year before during a visit to London. Drawn thirteen years before Honolulu's streets were laid out officially, this map indicates that very few streets were recognizable in 1825. The road to the north-east leads to the upper fort on Punchbowl Hill.

HONOLULU'S STREETS

By T. BLAKE CLARK, Ph.D.

In 1838, just one hundred years ago, English and American merchants in Honolulu village leaned against their grass-shack doorways and wondered whose place was going next. Those kanakas were as busy as devils, pulling up fences, recklessly tearing down or setting matches to "homes" and "business houses" in the great new project of straightening Honolulu's streets. Like the cartoon firemen of today who rush into a man's house with axe drawn and leave his fine furniture a mangled wreck, these early Hawaiians took more delight in the destructive than in the constructive changes which they were busy making.

Merchants, especially the English, deplored the whole procedure. "It's not as if there were no streets in the place," they complained. "After all, for years there have been what you might call streets. The *Sandwich Island Gazette* two years ago even dignified them with names—as if everybody doesn't know where everybody else lives anyway!"*

Progress went on in spite of dissenters. Kinau, or Kaahumanu II, published the following proclamation:

I, Kaahumanu II,
do hereby explain to you, O people of the foreign land and also to
those of these islands the work to be done on this year of ours. Here
is the work. I shall widen the streets in our city and break up some
new places to make five streets on the length of the land, and six
streets on the breadth of the land . . .

That is why some of our streets are closed. Because of the lack
of streets some people were almost killed by horseback riders and the
rulers of the kingdom barely escaped in 1834. . . . Because the streets
lack yards, therefore that may be the reason for the filth and stench
and the too close living that cause people of the city to be sick. Because
of the lack of streets, there is much foul odor to offend the nose,
therefore, perhaps causing dull headaches. . . . Therefore do not hinder
with evil hearts. . . .

Kaahumanu II.

Then the Kuhina Nui added twenty-two names of people who
were to take charge of the new work. The one to head the list
was her husband, Governor Mataio Kekuanaoa. The Governor
threw all his enormous energy into the project. Honolulu was

* In 1825 Bloxam noted: "The streets are formed without order or regularity. Some of the huts are surrounded by low fences or wooden stakes . . . As fires often happen the houses are all built apart from each other. The streets or lanes are far from being clean . . ."

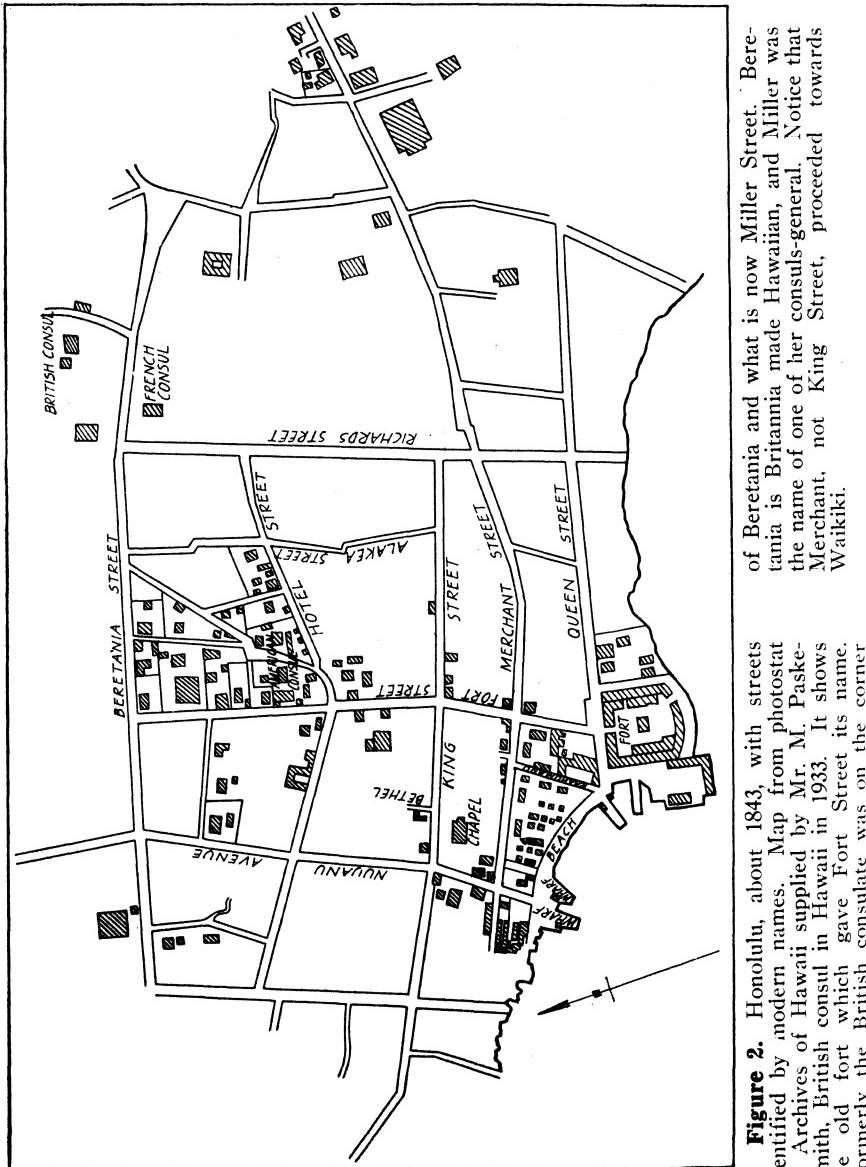


Figure 2. Honolulu, about 1843, with streets identified by modern names. Map from photograph supplied by Mr. M. Paske-Smith, British consul in Hawaii in 1933. It shows the old fort which gave Fort Street its name. Formerly the British consulate was on the corner of Beretania and what is now Miller Street. Beretania is Britannia made Hawaiian, and Miller was the name of one of her consuls-general. Notice that Merchant, not King Street, proceeded towards Waikiki.

going to be a planned town—no more of these corkscrew streets.

Two maps show us what Honolulu was like before Kekuanaoa began his drastic changes. They were made in 1818 and 1819 respectively. What both show is that there was little orderly arrangement of houses and streets, and that the bulk of the population was clustered near the harbor, with a good scattering along the banks of Nuuanu stream. The 1818 drawing, known as the Golovnin map because it was done by draughtsman Tabulevitch on the voyage of the Russian ship *Kamschatka*, commander Golovnin, lists six Honolulu landmarks important in the history of the city's development. A "white Stone House" impressed the draughtsman by its uniqueness. The old fort is given the prominent place it deserved, and is called "Akaman's Fort," or "The Chief's Fort." Then follow in one, two, three order the "House of the Spaniard Manini," "House of the American ship-builders," the wharf or dock, and four clusters of native houses.

In 1819, the year following Golovnin's visit, the French Captain de Freycinet sailed the *Uranie* into the harbor. De Freycinet's visit is memorable for two reasons. First, he brought to these shores one of the earliest white women to reach Hawaii. This was his wife, or, as some think, perhaps his mistress, who was a stowaway. Women not being permitted to sail on French naval vessels, she dressed in men's clothing and stayed on the ship when it left France. And second, de Freycinet had on board officer Duperrey, who has left us another old drawing of Honolulu. Duperrey's, like the Golovnin map, shows the main settlement to be between Nuuanu stream and the fort, but it also clearly indicates a popular movement toward the Nuuanu stream. There are some hundred and thirty-five thatched houses dotting this area, forty of them right along the edge of the stream. At least forty more settlers had forded the bridgeless stream and erected huts on the other side.

One hundred thirty-five houses make a good start. We do not know how many were added to these during the nineteen years from the date of Captain de Freycinet's visit until 1838, but there were doubtless enough to give Governor Kekuanaoa's men considerable work to make them conform to any strictness of line.

The situation was almost as if the Governor were starting with

a mass of houses so undefined and conglomerate that he felt he might as well lay out the city in perfect theoretical squares and hew away. The streets or "big paths," already formed were straggling, crooked, and narrow, necessitating the severe alterations complained of by the merchants. But they were useful in that they were considered streets and were probably followed in laying out the town.

The *Sandwich Island Gazette*, the progressive little paper already mentioned, in 1836 suggested names for only six streets. Five of these exist today: King, Queen, Merchant, Fort, and Kaahumanu. The sixth, Garden Lane, was a small street dividing the block bounded now by Fort, Beretania, and Union streets. Of these five, only Fort and Beretania have the same name first given by the Gazette in 1836. Opinions now may differ as to whether the later changes were made for the better: Queen street, which it must be recalled, ran much nearer the water than it does now since such a large area has been filled in, was Sea Street; Merchant was called Exchange Street; Fort was called Queen; and Kaahumanu, because native markets lined it, was Laulau Lane and Beef Lane.

All these names varied. Though King Street has persisted, it was called Church, Chapel, and even such commonplaces as Main and Broadway. Beretania was sometimes Back Street, but probably because the consul representing Britannia lived on it, Beretania proved the most popular. King was frequently referred to as Kawaiahao Street because of the church. When foreigners did not vary these names, the Hawaiians did. Fort was Alanui Papu, *pa* meaning "enclosure", and *pu* "gun." "Gun-enclosure" gives as precise a picture of a fort as one could find. Merchant was Alanui Kalepa and Alanui Kuai. King the Hawaiians referred to as Alanui Alii.

Although the *Gazette* suggested names for only six streets, we know that Kekuanaoa had others to work on. The editor himself said that there were other streets needing names and hoped readers would suggest some. We can be fairly sure that Nuuanu, "cool cliffs" was here. Because of the grog shops lining the lower section of this street, the part from King down to the waterfront was more familiarly known as Fid Street, "fid" being the sailor's word for "a drink." Also definable at this early

date was that part of Hotel Street between Fort and Union, though it was known as a part of Warren Square, so-called because William Warren "kept a genteel boarding-house there."

Union Street, was here, and also the little street running into it, Branch Street, later given its present name, Adams Lane, for the family of pre-missionary Alexander Adams. Alakea Street, running then only from Beretania to King, was called by the foreigners White Street, and by the Hawaiians Alakea, which also literally means "white street," deriving its name from the white coral rock with which it was paved. As we know, the Hawaiian name persisted.

The village of Honolulu one hundred years ago was probably in the shape of a slightly *kapakahi* rectangle bounded by four *alanui*, "big paths": Beretania at the top, Queen below, really only a pathway along the water's edge, and Nuuanu and Alakea on each side. Governor Kekuanaoa's job was to give a semblance of dignity and order to the town by straightening out these paths, widening them, and adding new ones where they were needed.

Seven years later, in 1845, *The Friend* boasted for Honolulu twenty-seven prominent chapels, schools, and government buildings besides forty-five business houses, and observed that Honolulu was taking on the appearance not only of a civilized but even "citified" place. "Measuring five-sixths of a mile long and two-thirds wide . . . it may be questioned," the paper further claimed, "whether there are many towns of its size in the world, which are under better police and municipal regulations. Riots and broils in our streets are rarely if ever known, while our Sabbaths are proverbial for the quiet and order which reign." Commander Wilkes, however, looks with less enthusiasm on the little town. "The streets, if so they may be called, have no regularity as to width, and are ankle-deep in light dust and sand. Little pains are taken to keep them clear of offal; and in some places, offensive sink-holes strike the senses, in which are seen wallowing some old and corpulent hogs. One of these, which was pointed out to us as belonging to the king, was tabooed, and consequently a privileged personage."

In the year 1845, progressive Governor Kekuanaoa's government employed a German surveyor, Mr. H. Ehrenberger, to survey the streets and draw a map of the town. This drawing,

reproduced in *The Friend* of October 1, 1845, shows that although the town had not grown any from bottom to top, that is from Queen to Beretania, it reached out on each side. Hotel, King, and Queen streets all had pushed north across Nuuanu beyond Smith Street, and even further south across Alakea and the recent Richards Street, clear out to Punchbowl Street, the city's Waikiki boundary.

With Punchbowl Street the town stopped. Beyond the mission premises, there was but one house. On the other side of this single structure, beyond where the Advertiser building is now, was swamp; and from where Fernhurst is, clear out to Punahoa, there was not a blade of grass nor a shrub of any kind—only a dry dusty waste called "The Plains". Honolulu's city limits, then, in 1845 were: on the makai side, the harbor, the waters of which came up to Queen Street; on the mauka side, Beretania, above which, where the Princess Theater is now, there were few if any residences other than the grass houses of Hawaiians; on the Ewa side, Nuuanu Stream; and on the Waikiki side, the swamps below, and the dreary, barren "Plains" above.

In only three years after surveyor Ehrenberger made his map, the city pushed onward in three directions. Liliha, the street of second importance in Nuuanu Valley, was laid out through taro patches and named in honor of Liliha, the beautiful wife of Boki, Governor of Oahu before Kekuanaaoa. With good foresight, the government also laid out the streets between Liliha and Nuuanu. Vineyard, originally a short way leading to Don Paulo Marin's grape orchard, was extended. Kukui Street was named for a favorite kukui grove. School Street led to the famous Royal School, the successor to the Royal School on Palace Walk, the history of which has recently been told with charm in *The Chiefs' Children's School*. Kuakini was named for five-hundred pound Kuakini, or John Adams, Hawaiian governor of the Big Island in the 1820's. Kuakini was noted for being one of the strongest men in the world, and for his earnest desire to get into the church—spiritually, that is; the physical doors were wide enough.

The next cross street up the valley was named for the Honorable G. P. Judd, whose "Sweet Home" was there. Liliha, later, was prolonged to Wyllie, named in the forties for the Honorable R. C. Wyllie, Minister of Foreign Affairs under Kamehameha III.

This further opening of Nuuanu Valley was a great development, but it did not compare in audacity with the laying out of the formidable "Plains", accomplished by surveyor Metcalf in 1846. A school had been started five years before at New Spring, Ka Punahou, to which children journeyed across The Plains, sometimes on foot, sometimes in the Chamberlain wagon drawn by a white horse, again behind the Wilder donkey in a blue wagon. Lydia Bingham, who lived in Honolulu's oldest frame building, now standing across from the Mission Memorial building, used to look from her second story window across The Plains all the way to Punahou. She could see her mother leave the school to come home. Over this bare prospect of The Plains, King and Beretania Streets, known as the Lower Road and the Upper Road, already ran a straggling course which changed as often as the dust piled up deep. The section of Beretania beyond Punchbowl Street was called Kamehameha. In this new tract, Young Street, midway between and parallel to King and Beretania, was laid out and named.

Although many of the streets had been known by specific names since the naming of them by the *Sandwich Island Gazette*, it was not until 1850 that they received official designation. At the same meeting of the Privy Council in which Honolulu was officially declared a city and the capital of the Hawaiian Islands, official names were given to thirty-five streets, walks, places and lanes. Because so many of these names still exist after almost one hundred years, they are of sufficient interest to repeat here:

Maunakea Street	Beretania Place
Nuuanu Street	Washington Place
Papu or Fort Street	French Place
Kea	Palace or P'a Halealii
Richards	Stone House
Puawaina or Punchbowl	Eden House
Kawaihao	Kahuna Street
School-Lane	Merchant Street
Adams Street	Kaahumanu Street
Garden or Kihapai	Marin or Manini Street
Crooked Lane or Keekce Street	Mission Place
Smith's Lane	Young Street
King Street	Kamehameha Street
Queen Street	Kinau Street
Hotel Street	Victoria Street
Palace Walk or Hale Alii	Washington Street
Printers Lane or Pai Palapala	Kecaumoku Street
Beretania Street	

Most of these thirty-five we still have. Perhaps the most

obvious change in naming was the dropping of Beef Lane in favor of Kaahumanu. Crooked Street exists no more, though one might suggest more than a couple of streets the name would fit, and Garden, or Kihapai Street, has been absorbed by Bishop. Printers Lane was named for the mission printing shop, by which it ran. It was called by the Hawaiians Pai Palapala, "printing press". About one-half a block of this little street remains. It probably has retained its original appearance of one hundred years ago better than any other street in Honolulu. It is just mauka of the Mission Memorial building. Palace Walk was absorbed by Hotel Street when Hotel was extended beyond Richards Street.

At the beginning of The Plains, the first cross-street, Alapai, was named for Julia Alapai, the wife of a prominent chief; and near the middle of The Plains, Piikoi was named for Chief Jonah Piikoi, father of the former delegate to Congress. Chief Piikoi lived at the makai end of this street, in grounds boasting a grove of coconut trees and a fine spring. Farther out, Keeaumoku Street was named, perhaps for the father, more likely for the brother of Kaahumanu, both of whom had this name. Running parallel to and above Beretania was Kinau, named for High Chiefess Kinau, Kuhina Nui, who was the daughter of Kamehameha the First and mother of Kamehameha Fourth and Fifth. At the extreme end of this survey, across Punahou Street in the Punahou lower pasture, Dole, Beckwith, Alexander, and Bingham streets were laid out in 1880 by the Punahou School trustees. All were named for prominent men: the first three were, in order, presidents of the school; it was to the fourth, Hiram Bingham, that Governor Boki made the original Punahou land grant in behalf of the mission.

Although most of the actual settling of The Plains did not come until the 1880's, after water was brought from Makiki Valley, surveying and laying out of streets in this area continued steadily after Metcalf's survey of 1846. Filling in the skeleton of the latter, Mr. C. J. Lyons in 1874 laid out Lunalilo Street, named for the king, who had died in February of that year, and Pensacola, for the U. S. warship which had carried Lunalilo to Hilo.

Wilder Avenue was at first called Stonewall Street for Kaahumanu's wall there, but was changed by the clerks in Mr.

S. G. Wilder's office. According to Mr. Lyons, the red tape was not very binding in those days, and the people in the survey office usually named the streets according to their own judgment, without waiting for government orders or sanctions. Kapiolani Street was opened in 1879 during Kalakaua's reign. So were Likelike and the Pawaa section of Kalakaua Avenue. This latter was known as "The Waikiki Road" until 1900, and went through several stages of widening and straightening before it reached its present development. It was re-named Kalakaua Avenue by the Legislature.

A smaller development of this period was the laying out in 1860 of the streets on the Esplanade, a name unfamiliar to our generation. It referred to the area of some eleven acres below Queen Street just filled in with the ruins of the Fort, torn down in 1857. These streets of the Esplanade were few. Fort was extended two blocks to form its north boundary, Alakea for the south. Halekauwila was the mauka street of this little square and the waterfront the makai. Kekuanaoa and Kilauea, between and parallel to Fort and Alakea, completed the streets on the Esplanade.

Propriety and imagination were exercised in naming the three new streets thus created. Kilauea was named for the steamer often at the wharf at the foot of the street. Honor was done the old governor Kekuanaoa when the street on which he lived was named for him. Ask a Hawaiian boy today how Halekauwila got its name, and he will probably say, "Because the city electric light and power house is on that street: *hale*—'house', *kauwila*—'electricity'." But, since the street was named in 1875 and electricity brought here in 1888, this explanation is wrong. According to Professor Lyons, "There was an old temple at Kona known as Halekauwila, which was a place of deposit for the high chiefs of olden times. It was built over two hundred years ago of kauwila wood, but about the time of the missionary period the timbers were brought to Honolulu and used in the construction of the first government house on Halekauwila Street. In this building the first constitutional business was transacted. It stood on the south part of what is now the Hackfeld [American Factors since the war] premises. The land commission also had its offices there."

The Duke of Edinburgh visited Honolulu in 1869. The Duke, who was extremely popular, had named in his honor Edinburgh Street, later absorbed by Bishop Street.

Until this period, there were no sidewalks, only the unpaved streets, dusty most of the time, inches deep in mud when rains came. The first sidewalk, of brick, was laid down in 1857 by a watchmaker named Sam Rawson. His place was on Fort Street about where Eastman Kodak Company is now. Rawson's walk was so popular that Hackfeld and Company put one down and, soon afterwards, Dr. Hoffman laid another in front of his fine drug store on Queen Street.

The Punchbowl area above Emma Street was opened in the first years of 1880. Unwatered, rocky land, it was first leased from the Kapiolani estate by individual Portuguese who broke the rocks, cleared off the ground and planted it, bringing the land from arid unproductivity to liveableness.

The development of the city to 1881, then, was mauka as far up Nuuanu as Judd Street; ewa to Liliha; makai to the Esplanade, and, farther out, King Street; and waikiki, Alexander Street.

We are brought almost into our own generation. The developments of the past fifty years are clearly phenomenal, now that the background is seen. The city has expanded more in the past fifty than in the previous hundred and fifty years of its existence. Although all districts were developing simultaneously, there has been a recognizable chronological expansion.

Continuing the earliest tradition of movement north, settlement began in Kalihi even before the Punahou section was well populated. In 1889 the Pacific Heights road was laid out by Mr. Wall, and sold by Hawaii's first subdivider, a Mr. Desky.* Kaimuki, which correctly to preserve its original meaning of "ti-root-oven" should be pronounced Ka-imu-ki, was opened near the end of the century. Waikiki, where people usually had only "summer homes" until then, was opened. Subdivisions of these and other areas have continued steadily since.

The final decision as to what name a street shall have rests with the Board of Supervisors, but this body usually accepts the recommendations of the Planning Commission. Except for the secretary and engineer, members of this commission are not paid

* This character, speaking on the subject of land deals, once said: "I have not been over-scrupulous myself." Actually Desky pulled several shady land transactions.

for their services, the job of recording history in Honolulu's streets being purely honorary.

The original commission, appointed in 1915, consisted of seven members. Mrs. J. M. Dowsett, president, and Mr. Arthur Wall, secretary, were assisted by Mrs. F. J. Lowrey, Mr. Walter Dillingham, Hon. J. K. Kalanianaole, and by ex-officio members Mr. L. M. Whitehouse, engineer, and Mayor John C. Lane. These were mostly public spirited individuals, glad of an opportunity to help plan and beautify the city.

The membership of the present-day commission reflects a policy of the supervisors to proceed as scientifically as possible in its street planning. Four members, Dean A. R. Keller, Professor J. M. Young, Mr. B. F. Rush, and Mr. A. A. Wilson, are well-known engineers. Mr. R. O. Thompson, landscape architect, Mr. C. J. Pietsch, realtor, and Mr. C. W. Dickey, architect, are also members whose professional knowledge is of particular value in the commission's work. Others whose interest or profession make their services and advice valuable to the commission of which they are a part are Mr. J. D. McInerny, president; Mrs. Grace M. Bartlett, secretary; Mr. M. B. Carson, Mr. V. Fernandes, Mr. James Gibb, Mr. L. P. Dickinson, and, ex-officio, Mayor Charles S. Crane.

The recent practice of the present commission has been to use Hawaiian names for streets. Good arguments against this practice are, first, that many of them sound alike, and, second, that they are often difficult to pronounce. If a fire breaks out or a burglar in on Kahaha Street, in your excitement the fireman or policeman you are calling may mistake the name for Kahala. If you are a malihini, you will probably have difficulty with Kanekapolei or Kaumualii, to say nothing of Kalanianaole or Kalauokalani. There is a story of a malihini policeman who was called over to Halekauwila Street by a Japanese man whose horse had been run over by a reckless motorist. The policeman sized up the situation, but when he whipped out his notebook to write his report, he was stumped. After chewing his pencil a second, he said to the Japanese, "Say, papa-san, drag that horse over to King Street so I can write down where this accident happened." We have First, Second, Third Avenues, and so on out Kaimuki way. It would be simpler to extend such a uniform method of naming.

But many people would dislike very much to lose the associations of the old names, or even the new ones, in favor of the first-second, north-south type of division. True, not all of the associations are poetic. Foundry Street, Factory Street, Industrial Road, or even Slaughterhouse Road do not provoke much nostalgia. But the people in survey offices and in planning commissions have, all in all, done a good job of street naming. One Honolulu lady, unaware of what distinguished names appear on the Planning Commission, said, "Like the legislators, the people who name the streets are gum-chewers, but they do try to do the right thing." We have them to thank for saving us from the trite names found in most mainland cities—Main, Broadway, Front, and their ilk.

Haphazard as street-naming was until very recent years, the history of the islands is preserved in our Honolulu streets. The earliest haoles resident in the islands are well represented. No group of men affords more curious speculation than those adventurers who came here in time to know Hawaii in the days of the great Kamehameha. Captain Alexander Adams, for whom Adams Lane was named, in 1817 took a cargo of sandalwood to Canton for Kamehameha I. Alongside an old friend from Scotland, Adams lies buried in the Nuuanu cemetery with this inscription on the joint tombstone,

Two croanies from the land o' heather
Lie sleepin' here in death together.

John Young, famous in island history as fighting companion and advisor of Kamehameha I, is the John Young for whom the present Young Street is named. But Old John also had a name given him by the Hawaiians. It was "Olohana". Before Kamehameha forcibly detained Young, the haole was boson of the *Eleanora*. His boson call, "All hands" became so familiar in the islands that the Hawaiians gave it to him for a nickname. Olohana Street at Waikiki between Kalakaua and Ala Wai, then, is named for John Young.

Don Francisco de Paula Marin came to the islands in 1791, twenty-nine years before the first company of missionaries. W. D. Alexander, historian, popularly known in his day as "Walking Encyclopedia" Alexander, says that as early as 1809 this enterprising Spaniard was raising oranges, figs, grapes, pineapples,

vegetables, and roses; making butter and wine, and salting beef for ships.

Hunnewell Street, running up from Metcalf across Vancouver and around to Kamehameha Avenue, was named for James Hunnewell, who made two tours of Oahu in 1817, returned as an officer on the *Thaddeus*, and later became captain of the *Missionary Packet*, owned by the American Board. Helping to found Brewer & Co. here, he is said to have made a comfortable fortune within a few years and retired to Boston.

Parker Place, off Alaula Way near University Avenue, was not, as some think, named for the Parker who came to the islands in Kamehameha's day, but for the Rev. H. H. Parker, who owned land in this area. The earlier Parker is colorful enough to deserve a street name. The apochryphal story of the origin of his fortune is that Kamehameha I gave him all the land a runner could bound in one day. Anyone riding over the Parker Ranch today is likely to doubt the tale or admire the speed and endurance of the early *kukini*.

At least three more of the best-known of these earliest haole settlers are not remembered in our streets. Both Isaac Davis and Oliver Holmes were colorful personalities who deserve a place. Both, incidentally, have descendants living here today. Delegate Samuel Wilder King and Mr. Robert King, for instance, are descendants of Holmes. The Frenchman Rives, influential under Kamehameha I and especially friendly with Kamehameha II, whom he accompanied to England, is the third, and also left distinguished descendants. It was largely through his suggestion that the Catholic missionaries came to Hawaii July 7, 1827.

The missionaries, who altered the course of island history, are recorded here. Hiram Bingham, one of the most influential, is remembered in the street of his name near Punahou. Lowell Smith long ago had Smith Street, or Alanui Kamika, as the natives called it, named for him. In ironical contrast with the conduct of the man whose name it honored, this street, between Nuuanu and Maunakea later became the vice district. Chaplain Lane was named for Chaplain Damon, in charge of the Seaman's Bethel and Home in early days. Loomis, Alexander, Richards, Chamberlain, Cooke, Armstrong, Whitney, and Wilcox are others whose lives are the story of the American mission in Hawaii. One of

the most colorful of all the missionaries, Titus Coan, who baptized more people—seventeen hundred and five, to be exact—than had been converted in one day since the day of Pentecost, has not yet been remembered in a street name.

Energetic early merchants, as well as missionaries, are recalled in every casual drive through town. The most prominent of these names is Bishop. C. R. Bishop came to Honolulu just before the California gold rush of 1849 which he would have joined but for the persuasion of his partner, Mr. Aldrich. Mr. Bishop married Bernice Pauahi Paki, daughter of a high chief who for a time opposed the match. A thrifty New Yorker, Mr. Bishop once confessed to an intimate friend that at first it was mighty hard to give away money, but, as we know, he and his wife became two of Hawaii's greatest benefactors. Bishop Street is really named for his wife, but it of course also recalls the merchant.

Spreckels Street, a one-block way between Dole and Wilder near Punahou, seems a small reminder of that colorful fortune-maker, Claus Spreckels. Brewer Lane in the center of town reminds us that Peirce and Brewer was an important business in Honolulu village one hundred and two years ago. Its history has been the subject of an interesting special study. Dowsett, Waterhouse, Spencer, and Cummins are other early business men remembered in Honolulu streets. Most of these were here in the 'forties.

Boki, or Poki, for whom Poki Street, from Wilder to Nehoa, was named, was the native governor of Oahu who accompanied Liholiho to England. Hoapili, named "close-companion" by Kamehameha I, and the one whom the conqueror entrusted to hide his bones so that they should never be used "as fish-hooks, or as arrows to shoot mice with," is remembered in the lane by his name off North King. For one who did his work so well, his monument seems unpretentious. Paki, distinguished alii, father of Bernice Pauahi and opposer of his royal daughter's marriage to banker Bishop, has named for him the street which forms the northern boundary of Kapiolani Park.

John Young, Jr., handsome son of the advisor to Kamehameha I, is honored by having his Hawaiian name remembered in a street at Waikiki near Olohana. This is Keoniana, the Hawaiianized version of "John Young." For the selection of such appro-

priate names for these and other streets at Ala Wai, the city is indebted to Mr. Bruce Cartwright whom the present commission asked to suggest names.

These are only a few of the many renowned alii whose fame is recalled daily in our streets. Others, such as Liholiho, Lunalilo, Liliuokalani, Kuhio, Kamamalu, Kaiulani, and Kalaimoku, are familiar and numerous.

A number of streets record the memory of men, both Hawaiian and haole, who were prominent in government affairs from the reign of Kamehameha III to the end of that of Queen Liliuokalani. Kapaakea, a small lane off Kapiolani Boulevard, commemorates a high chief by that name, a member of Kamehameha III's Privy Council and father of King Kalakaua. Rooke Avenue, behind Wyllie Street, reminds us of Dr. T. C. B. Rooke, one of the best-liked men of his profession ever to live in Hawaii. Dr. Rooke was a representative under Kamehameha IV. By his marriage with a daughter of John Young the First, he became the step-father of the girl who was later Queen Emma.

Kanaina, Konia, Kanoa, Kapena, Kalama, and Naone streets bear names of members of the Privy Council, the House of Nobles, or of the Legislature before 1860. Konia and Kalama were women.

Hall and Spencer streets, Aholo and Bush lanes, and Gulick Avenue were named for former Ministers of Finance. Mott-Smith Drive reminds us of another Minister of Finance, Dr. J. Mott-Smith, but it was named particularly for Mr. E. A. Mott-Smith, also prominent in later governmental affairs and a trustee of the Lunalilo Estate through the former grounds of which the street runs.

Green Street and Austin Lane are for former ministers of Foreign Affairs under King Kalakaua.

Four attorneys-general have been remembered in Stanley, Ashford, and Whiting streets, and Peterson Lane.

These are the glorious dead. How does one join them? What induces the thirteen members of the Planning Commission to choose a contemporary for honor along with these figures of the past? It is not often that one is chosen. Perhaps the best answer to this query will be found in a partial list of these living people who are already honored in this way.

Adolph and Ferdinand streets in upper Manoa are the first names of Messrs. Adolph and Ferdinand Schnack.

Burbank Street, off Wyllie, is for Miss Mary Burbank, Honolulu's first public librarian. She owned and opened this property.

Coyne Street in the McCully Tract is for Mr. Arthur Coyne, who has the furniture store on Bishop Street.

Frear Street, near Punchbowl, is for ex-Governor Walter F. Frear.

Lowrey Avenue, the only street connecting East and Upper Manoa roads, is named for Mr. F. J. Lowrey, president of Lewers and Cooke.

Aukai Street at Kahala, was named for Edward K. Aukai, who has been caretaker of the Judd property near Hakipuu for several years.

Pacheco Street, mauka of North King, is for Mr. Manuel C. Pacheco, a supervisor for many years.

Eliwai Lane, or "Dig-Water" Lane, is for Mr. Lincoln L. McCandless, prominent in Hawaiian politics.

Webb Lane, near Kukui Street, is for Mrs. Lahilahi Webb, well-known Hawaiian authority of the Bishop Museum.

So far as I can determine, Mrs. Lahilahi Webb is the only person living who has two streets named for her. One is Webb Lane, where she lives near King Street, and the other is Lahilahi Lane, which means "thin as beaten gold." Mrs. Webb in her own lifetime has an honor given to but few of all the famous alii or distinguished foreigners who have paraded through Hawaiian history. John Young, Kapiolani, and Kuhio are others so honored.

Many Hawaiian names are poetic or have been selected to describe the beauties of the streets they designate Anuenue in Manoa is a familiar example of the appropriateness such names often have. Residents of Anuenue claim at least one rainbow a day. In fact Manoa boasts so many, that only three blocks past Anuenue there is a street with the same name, only translated. Rainbow Drive is just beyond the Waioli Tea Room off Oahu Avenue.

Lanihuli, the first street off Punahou past the school means "changing heavens." Eu Lane in Palama means "the lane of the rising mist." Hanamana Place off St. Louis Heights means "the

work of the gods." Auwaiolimu Street near Pauoa Stream at the foot of Pacific Heights, though probably named with the land tract Auwaiolimu in mind, quite appropriately means "mossy ditch." Alewa also deriving from a land tract, means "floating like a cloud," a poetic name and one suitable for these heights. Off Kapahulu, near the Fair Grounds is Hoolulu, named for a Hawaiian chief but also meaning "quiet," and near University and Oahu is Hoomaha, "rest"—appropriate names for streets on a South Sea island.

Poetic Alaula, or "Way of the Dawn," near University and Oahu, was until recently Jones Street, named for a well-known man formerly here, Mr. P. C. Jones. It was changed when a prospective renter of a fine house on this street said: "I'll not live in Honolulu on Jones Street!" The landlady, an energetic and popular woman, got busy with a petition and had the name changed.

Foreign nationalities other than American and English are not frequently represented. Yamada Lane near Liliha and School streets, and Oka Lane between King Street and Kapiolani Boulevard are the only Japanese-named streets. The lanes or streets named Chun Hoon, Ah Lo, Zen, or Apio seem to be the only Chinese. A number have Portuguese names, such as: Lusitana, Azores, Madeira, Magellan, San Antonio, Lisbon, in the Punch-bowl neighborhood; Coelho, up Nuuuanu; and Fernandez, Nobriga, and Perry in Kalihi.

In the new St. Louis Heights section, a cluster of streets has been named for Hawaii's Roman Catholic bishops and for the brothers of St. Louis College. Maigret Street is for the first Roman Catholic bishop, Louis Maigret; Herman for the second, Herman Koeckmann; Gulston for the third, Gulston Ropert; Libert for the fourth, Libert Boeynaems; Alencastre for the present bishop, Stephen Alencastre. Felix, Alphonse, Eugene and Frank streets, Robert Place and Brother Ley Place are for the brothers of the College. Bertram street, also here, commemorates the school's founder.

As in St. Louis Heights there are streets for the Catholic bishops and brothers, up Wilhelmina Rise groups are named for ships familiar to island people. The Lurline, Matsonia, Maunalani, Mana, Sierra, Wilhelmina, and Claudine all run into each other

here without catastrophe. The Sonoma and Ventura escaped this group and have their own quiet collision above Manoa Road.

Though we miss the nationalities in our street names we do have all the colors. Alani, "orange", is represented by a drive in Woodlawn and a street above North School. Alakea, "White Street", is familiar to all; Halelena, or "Yellow House", Street is near University Avenue on Oahu; we don't have a Black Street, but there is Black Point Road, Brown Way in East Manoa, and Green Street crosses Kapiolani above Lunalilo.

Citron, Lime and Date in the McCully tract, Coconut at Diamond Head, Iholena, or banana, near Judd Street, together with Ilima on Alewa Heights, Hibiscus and Poni Moi or Carnation at the end of Kalakaua Avenue, Lehua in Kalihi, Awapuhi or Ginger, above Manoa Road, and Pikaki off Pinkham up North King show the recent practice of the Planning Commission to remember island fruits and flowers. Perhaps taking a hint from Kukui Street down town, the Commission also has given us Algaroba in the McCully Tract, Banyan off North King, Koa at Waikiki, Ohia and Iliahi or Sandalwood, near Kuakini and Nuuanu.

A number of fish have been immortalized in our streets, though not the famous Humuhumunukunukuapuaa. Kepuhi, or Eel, Street is near Fort Ruger.

Lest we come to think ourselves too self-sufficient, we have constant reminders that the life of Honolulu depends upon the productivity of Hawaii, Kauai, Maui, and Lanai, all of which are to be seen in the recently developed section behind Wyllie Street. Molokai and Kahoolawe are as yet unrepresented.

Hawaii's benefactors from abroad have not been forgotten. Captain Cook Avenue near Punchbowl, Vancouver in Manoa, and Portlock out Kalanianaole way stand in memory of the first three English navigators to reach the islands.

Lincoln Avenue, off Kapahulu, reminds us of Hawaii's zeal for the winning side in the Civil War. Sugar-planter James Makee sent barrels of molasses worth several hundred dollars to the Federal side. They were welcomed with a very bad poem reprinted in *The Friend* which spoke of the sweet gift from across the seas. Samuel Chapman Armstrong, son of a missionary, became a Union General, and after the War began Hampton

Institute which he modeled on the work-study method of Lahaina-luna and the Hilo Boarding School. McKinley Street honors another President. It was under his administration that Hawaii was annexed.

An appropriately named little group of streets is at Waikiki: Kaiulani, Cleghorn, and Tusitala. These recall the celebrated beauty, Princess Kaiulani, who died at the age of twenty-four; her father, Governor A. S. Cleghorn, who married Princess Like-like; and Robert Louis Stevenson, the "Teller of Tales", who spent many happy hours with Kaiulani, then a little girl, at her Waikiki estate, Ainahau. Kaiulani Street extends from Ala Wai to the street named for the Princess' uncle, King Kalakaua. It runs parallel to the street a few blocks over, named for her aunt, Queen Liliuokalani.

An oddity in Honolulu street names is Corkscrew Lane, near Beretania and Fort. Once a longer street than at present, its name derives from whaling days, and commemorates unsteady seamen weaving down its turns. When the engineers were laying out Frog Lane off School Street, some of the workers said: "There's lots of frogs up here; they ought to name this Frog Lane." Somehow their suggestion got through. Perhaps some wishful thinking on the part of residents near Laimi Road off Nuuanu was given expression when they named their little way "Easy Street."

Why some streets have their particular names is impossible to say exactly. When Professor Lyons in 1902 gave a talk about the streets he said somewhat contemptuously: "These newer streets that were named by the real estate promoters I know little about—they were just named."

Hone Lane, for instance, near the Ewa end of Vineyard, means "Mischief Lane," but precisely why this little block was singled out for this name or just who suggested it, does not seem to be known.

Since Huene means "asthma," one naturally inquires whether the section above Wyllie Street where Huene street is located is supposed to be good for that ailment. But it was named for a Hawaiian named Huene. How the Hawaiian came to be called "Asthma" is a mystery. There must be a story somewhere there as there must be behind Kaluahine or "Old-Lady," Lane near

Vineyard and Liliha, but speculation helps little.

There are three streets in Honolulu whose meaning has to do with chickens. Near where University and Oahu avenues join, running off Alaula Way is a short road given the name of a former tract called Pamo or "Chicken Yard." Up Nuuanu, off Laimi Road is Huamoa Place, or "Hen's Egg Place," and at Waikiki is a street named after a celebrated heiau once located there called Helumoa or "Chicken Scratching." This last concerns a legend of a great rooster which flew from Palolo to Waikiki, but just what he did to immortalize himself above all the other proud males who have strutted there since is not clear.

"Kakaako," which has been such a popular name that it designates both a street and a section, means, "low, underhanded, fraudulent, tricky, mean." The people in this district have been further imposed upon by a street named Kawai, which means the second weak brew after okolehao is distilled. It sounds like a drink full of watery fusel oil.

In Honolulu streets there is a storehouse of history, legend, anecdote, and human interest. They are a people's creation. The Planning Commission has not arbitrarily imposed names on new streets, but has taken suggestions and found out what name is appropriate, and also agreeable to residents. What the people have created is meaningful, and frequently savors of a robust and racy humor. Surveyors from the days of Kekuanaoa to the present have shown foresight in laying out the streets, and those people responsible for naming them have given us much that is choice and rare. Let us hope that our Lanes and Ways will continue to reflect the charm, the color, and the variety of life in Honolulu.

EDITORIAL NOTE

A tradition indicating a novel origin of Richards Street is preserved by Dr. C. Montague Cooke as received from his father, the late Charles M. Cooke who, as a boy, lived near the street.

Comparing the maps in figures 1 and 2, it may be observed that the boundary in figure 1 between "The Town of Honoruru" on the one hand and the royal precincts as indicated by Pitt's and Kaahumanu's houses on the other, corresponds approximately with

the site of Richards Street in figure 2 which serves as a similar boundary and continues so until the present day. We may therefore conclude that the sites of the boundary in figure 1 and of Richards Street in figure 2 are approximately the same.

It may be observed further that Richards Street in figure 2 is, alone of Honolulu streets, in the combination of being straight, of even width and reaching to the water-front; also (compare site with figure 1) it is in line with the edge of the reef bordering the harbor channel.

The setting provides a rather remarkable confirmation of part of the tradition, which is to the effect that the street, originally, was the inland tow-path for Governor Kekuanaoa's ox-team as it drew the larger vessels up the narrow channel into the harbor basin.

As shown in figure 1, at low tide the reef was dry. The ox-team waited on the eastern point of the harbor entrance until connected by a hawser with the vessel anchored in the deep water outside. The hawser necessarily was very long because the shoal water extended outward for quite a distance. When all was ready, the team walked along the channel reef but, as such towing must be in straight line, on reaching the beach the cattle could only proceed straight inland until the long hawser had drawn the vessel right into the basin.

These facts and conditions indicate that the tradition is correct as to the observations made at a particular period. But it is not fully correct because it might seem that the track was used first for man-towing power, which was succeeded by the ox-team.

The harbor's narrow entrance and channel were always a problem for vessels entering. The small inter-island schooners were able to negotiate it without help, but the larger foreign vessels were towed in—first by their own boats and later by double-canoes. This continued until late in the 1830's when for about a decade and a half the motive power was human—natives marching along the channel reef as described for the ox-team. Different accounts give the number so employed as from 200 to 400. The period of ox-towing followed that of the men. In one account the team numbered twenty oxen. Later, a steam-tug took up the burden.

Figure 3
Model of Hawaiian
outrigger canoe in
P. Bishop Museum.

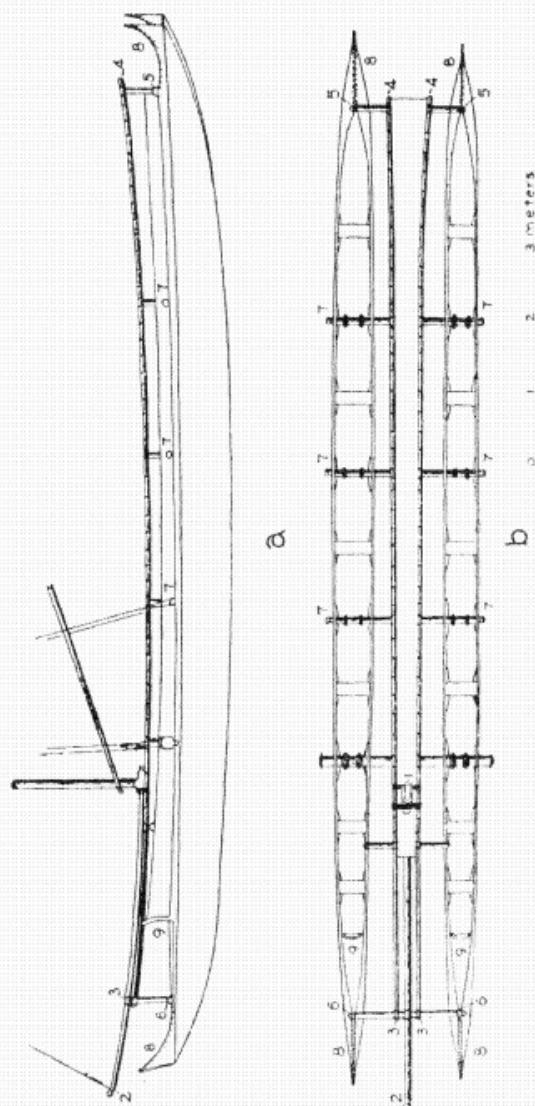
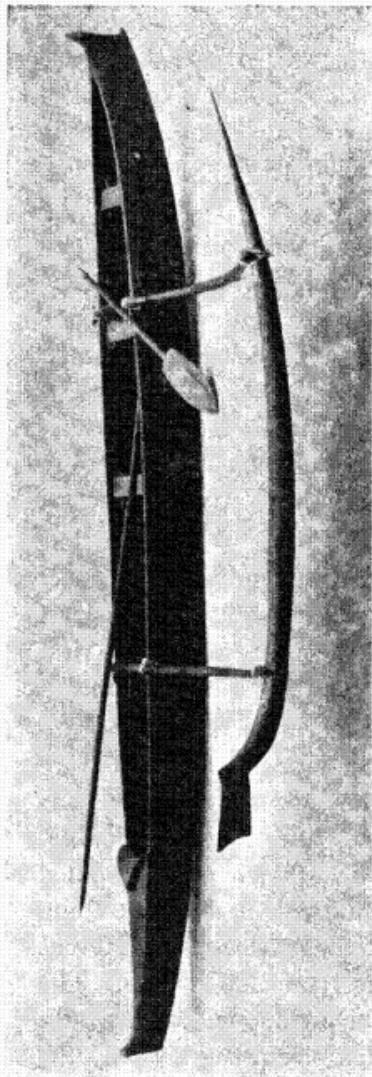


Figure 4.
Double canoe of King
Kamehāmehā, after
drawing in 1839 by Paris
(1841, pl. 127); *a*, side
view; *b*, deck plan; 1,
mast shoe; 2, end of
bowsprit (a European
addition); 3, 4, side rails
of platform; 5, 6, outer-
most cross-hoop at each
end; 7, principal cross-
booms; 8, end covers;
9, breakwater.

THE CANOE MAKING PROFESSION OF ANCIENT TIMES

Translated by Mary Kawena Pukui

Bernice P. Bishop Museum

Edited and Annotated by Kenneth P. Emory

Preface by MAUDE JONES, Librarian, Archives of Hawaii

For many years a box labeled "Board of Education, no dates to 1848" remained untouched on the mezzanine floor of the Public Archives at Honolulu. When the contents of the box were finally explored they were found to consist of essays written in the Hawaiian language. These essays were evidently composed by Hawaiians preparing for teaching—the handwriting and the language show them to have been written by adults rather than by children. Some are signed and dated, others not. They embrace such subjects as, the advantages of education, patriotism, fishing.

In the bundle marked "no dates" was one, unsigned, which seemed of especial interest. The paper, the ink, and even the handwriting closely resemble the themes written at Lahainaluna Seminary in its early days. With the cooperation of Kenneth P. Emory and Mary Pukui of the staff of Bernice P. Bishop Museum, we are able to present to you an edited translation of this paper, bearing the title, *Ka oihana kalai wa'a** o ka wa kahiko (The canoe making profession of ancient times).

Illustrations, on page 26, of two types of Hawaiian canoes are supplied by the Bishop Museum.

* The glottal closure or glottal stop which is now termed a hamzah and which one hears in Hawaiian speech is represented in the native text here given by the unusual sign for it, the inverted comma ('). As a consequence of it not being indicated by the Hawaiians in writing, one reading the text who is not thoroughly familiar with the language is bound to mispronounce many of the words, and to be at a loss as to the meaning of some. The hamzah in Hawaiian represents a "k" which has been dropped but which appears in other Polynesian dialects such as the Marquesan, Tuamotuan, and Maori. *Rekareka* in Tuamotuan is *le'ale'a* in Hawaiian; and *kaoko* in Tuamotuan is *'ao'ao* in Hawaiian. As very few Hawaiian texts showing the hamzah are likely to be printed, we are glad of this opportunity to give it. I have inserted it where it occurs after listening attentively to the reading of the text by Mary Pukui. In the case of the verbal particle *ua*, the specifying particle *o*, and several other particles, the glottal seems to have worn away more or less in Hawaiian, but I have let the glottal mark stand to represent the "k" which has been dropped.—K. P. Emory.

KA OIHANA KALAI WA'A O KA WA KAHIKO

'O ka oihana kalai wa'a o ka wa kahiko, he oihana nui ia i hana nui ia i ka wa kahiko o Hawai'i nei, no ka mea mai loko mai 'oia oihana i loa'a mai ai na wa'a lawai'a, na auwa'a kaua, a me na wa'a holo mai kekahī mokupuni a i kekahī mokapuni.

'O na kahuna kalai wa'a, he po'e nui a hanohano lakou i ka wa kahiko, a he po'e punahele i na' li'i. Oko'a ka papa kahuna ali'i, a oko'a ka papa kahuna maka'ainana.

Ma ka papa kahuna ali'i, 'ua mahele ia penei: ka papa kahuna mo-i, ka papa kahuna o na' li'i 'ai moku, ka papa kahuna o na' li'i 'ai okana, ka papa kahuna o na' li'i 'ai ahupua'a. 'O keia mau papa kahuna malalo no o ka papa kahuna ali'i.

'O na la'au e kalaiia ai i wa'a, 'oia no ke koa, ke kukui, ka wiliwili. 'O ke koa na'e ka la'au maika'i loa, a 'oia ka mo-i o na la'au wa'a o ka wa kahiko.

'Ua puni na ulula'au o keia mau mokupuni i ka nohoia e na kahuna kalai wa'a, no ke kalai ana i na wa'a. A ma na ulula'au o Hawai'i na la'au koa nui, i hiki aku i ka umi, umikumamalima, a iwakalua ka loa. Mai loko mai o keia mau la'au koa i loa'a mai ai na wa'a kioloa, kaukahī, kaulua, a me na wa'a peleleu.

Ma keia wahi la ke ho'okokoke aku nei kakou ma ke kulana o ke kalai ana. A penei a mahele ana: I. Na makaukau o ke kahuna. II. Ke kalai ana. III. Ke kauo ana. IV. Ke kapili ana.

I. Na makaukau o ke kahuna 'oia ke akamai maoli no a me ka 'ike i na loina o ka nana ana i ke koa iho 'ole a puhā 'ole. A ina he kinā ke koa, hiki no i ke kahuna ke ho'ololi a'e ma ke 'ano o ke kalai ana a lilo no i wa'a maika'i.

1. 'O ke ko'i kalai wa'a o ka wa kahiko 'oia no ke ko'i pohaku. Ka pohaku a kakou e mana'o nei, 'a'ole e moku ka la'au ia ia, 'oia na'e ke ko'i o ka wa kahiko. 'Ua loa'a mai ke ko'i pohaku ma ka imi ana' ku ma na pohaku kupono no ke ko'i.

He nui ka luhi o ka hana ana i ke ko'i pohaku. Ka wawahī ana, ka 'anai ana, ka ho'opilipili ana, a pela' ku. Ina he wa'a ali'i, nui na kanaka e kaumaha i ka hali ana i ke ko'i i kahi e

THE CANOE MAKING PROFESSION OF ANCIENT TIMES

The canoe making profession of ancient times was one that was much practised in the olden days here in Hawaii, because it was through this profession that fishing canoes, fleets of war canoes, and canoes that went from island to island were obtained.

The canoe building experts (*kahuna kalai wa'a*) were important and honored in times past and were favorites of the chiefs. The class of royal experts was different from the class of common experts.

The royal experts were divided in this manner: the experts of the supreme ruler, the experts of the ruling chiefs, the experts of the district chiefs, and the experts of the chiefs of the *ahupua'a* land sections. These were classes of experts under the class of royal builders.

The timber used in hewing canoes were the koa (*Acacia Koa*), the kukui (*Aleurites moluccana*) and the wiliwili (*Erythrina sandwicensis*). The koa indeed was the very best and the king of all canoe making timber in the olden days.

All the forests of these islands were occupied by canoe making experts for the purpose of hewing canoes. In the forests of Hawaii were huge koa trees, up to ten, fifteen or twenty (fathoms?) tall. From these koa trees, the long, light canoes, the single ones, the double ones, and the large war canoes were made.

Here we are drawing near to the way the hewing was done. It was divided in this manner: I. The preparations of the *kahuna*. II. The hewing. III. The hauling. IV. The building.

I. The preparation of the canoe building expert was his actual skill and his knowledge of whether a tree had no soft center or hollow. If there were a blemish in the koa, the priest could change the way of hewing it till it became a good canoe.

1. The adzes used for canoe making in the olden days were stone adzes. The stones which we think impossible for wood cutting were the adzes in the olden times. Stone adzes were obtained by seeking stones suitable for adz making.

Making a stone adz was a laborious task. (There was) the chipping, the grinding, the lashing, and so forth. If the canoe (to be made) belonged to a chief, many men would be weighed

kalai ai. I ke kalai ana, oko'a na kahuna 'oki, oko'a ka po'e 'anai ko'i, oko'a ka po'e ho'opilipili i ke 'au. Oko'a ke ko'i no ke 'oki a kalai, oko'a ke ko'i no ke kalai ana ia loko o ka wa'a. 'O ke ko'i pohaku, 'oia wale iho la no ke ko'i kalai o ka wa kahiko o Hawai'i nei a hiki mai i ka wa o Kamehameha I, a mamua aku paha. A he mea 'aka 'aka paha ia kakou ka hanauna hou ka lohe ana i ke ko'i o ko kakou po'e kupuna kahiko. I 'aka'aka 'oe i ka loa'a ana o ke ko'i kila, a i lipi a Ioane.

2. O na 'aumakua. 'Oia kekahi makaukau o ke kahuna. 'A'ole kahuna kalai wa'a o ka wa kahiko i nele i na 'aumakua. 'O na 'aumakua 'oia ka mea kokua i na kahuna i ke kalai ana a me ke kaupo ana. 'O na 'aumakua o ka po'e kahuna kalai wa'a kaumaha ai 'oia: Ku-pulupulu, Ku-moku-hali'i, Ku-alanawao, Kupa-'ai-ke'e, he mau 'aumakua kane keia. O na 'aumakua wahine, o Laea a me Ku-pepeiao-loa. 'Aia ma ke mele a Kana no ke kaupo ana i na wa'a ia Kau-ma-'eli'eli ma, i ho'ike ia ai na 'aumakua a pau.

A 'ua pipili keia mau 'aumakua me ka po'e kahuna o ka wa kahiko. 'O ko'u kupuna kane he kahuna kalai wa'a ia. 'Ua pi'i pu au me ia i ke kuahiwi. Pāpā mai 'oia ia'u, 'a'ole e kipepehi ma ka nahelehele, 'a'ole e pipi'i i luna o ka wa'a, o huhu na 'aumakua. Ma (ka) auina la 'ike makaaku la au i kekahiki kanaka elemakule me ka 'umi'umi ke'oke'o, a me ke kihei kapa maoli e 'a'ahu ana, a e noho ana 'oia malalo o kekahiki kumu koa. A i ko'u kuhikuhana' ku i ku'u kupuna kane, 'olelo mai ana kela, " 'Ua 'ike no ia o na 'aumakua ia o ke kuahiwi nei." Me keia mea, 'ua maopopo ka noho pu ana, hana pu ana, a kokua pu ana o na 'aumakua me na kahuna kalai wa'a o ka wa kahiko.

3. Na mohai. 'Oia ke kolu o na makaukau ma ka 'ao'ao o ke kahuna. Ina he wa'a no ka papa ali'i, eia na mohai: he pua'a anana, he i'a 'ula, he 'a'ahu, he niu, a he 'awa. A makaukau keia mau mea a pau, alaila o ka pi'i no ia i uka a hiki i kahi o ka la'au koa e 'oki ia ai i wa'a. Hoā ka imu o ka pua'a, kalua a mo'a, hali'i ka papa 'aina ka 'ie'ie, ka maile a me na lau lipolipo no o ka nahele a pau. Noho like na kahuna ma ka papa 'aina. 'Oki'oki ka pua'a. A makaukau na mea a pau, alaila pule ke

down with the adzes which they carried to the place where the hewing was done. In hewing, the experts who did the cutting were different (men), the adz grinders were different, and different ones attached them to the handles. Different adzes were used for chopping and hewing and different ones to hew out the inside of the canoe. Only stone adzes were used for hewing in the olden times here in Hawaii down to the time of Kamehameha I or perhaps earlier. Perhaps we of the newer generations laugh when we hear of the adzes of our ancestors of old. You laugh because you have axes of steel and sharp ones from John.

2. The 'aumakua (ancestral gods). This was something with which the experts were supplied. There was no canoe making expert who lacked an 'aumakua. It was these 'aumakua who helped the experts in hewing and hauling. The 'aumakua worshiped by the canoe making experts were Ku-pulupulu, Ku-mokuhalii, Ku-alanawao and Kupa-'ai-ke'e who were male 'aumakua. The female 'aumakua were Laea and Ku-pepeiao-loa. In the chant of Kana* for the hauling of the canoes Kauma'eli'eli and others, all the 'aumakua were mentioned.

These 'aumakua remained very close to the priests of old. My grandfather was a canoe making expert. I used to go with him to the mountains. He warned me not to crush the vegetation, (and) not to climb onto the canoe lest the 'aumakua became angry. One afternoon I saw an old man with a white beard covered with a shoulder covering of real tapa sitting under a certain koa tree. When I pointed him out to my grandfather, he answered, "Now that you've seen, that is an 'aumakua of the mountain". In this way, it was known that the 'aumakua lived with, worked with, and helped the canoe making priests in olden times.

3. Offerings. This was the third thing with which the priests were supplied. If the canoe (to be built) belonged to a chief, these were the offerings: a hog a fathom in length, red fish, clothing, coconuts and awa. When all these things were ready, then he went up to the place where the koa tree to be cut into a canoe was found. (He) lighted the imu for the hog, cooked it, spread out a place for eating with ieie (*Freycinetia borea*), maile (*Alyxia olivaeformis*) and all other green leaves of the forest. All the priests sat down at the eating place. The

* For legend of Kana and chant of hauling of canoe Kauma'eli'eli see Fornander Collection of Hawaiian Folk-lore, Vol. 4, pp. 435-449.

po'o o na kahuna ma ke kahea ana ma ka inoa o na 'aumakua. A pau ka pule, 'ai no ho'i na 'aumakua i ka lakou. A 'ai noho'i na kahuna i ka lakou. A pau ka 'ai ana o ka ho'omaka no ia o ka hana.

A ma'an'e'i la e na hoa akahi no kakou a ho'okokoke aku ma ke kumu o ka la'au koa.

II. Ke 'oki a me ke kalai ana. 'Ua 'ai na kanaka a maona, a 'ua 'olouha ko lakou mau 'opu, alaila o ka ho'omaka iho la noia o ke 'oki ana. Ku mai na kahuna me na ko'i pohaku a puni ke kumu o ke koa, alaila ho'omaka ke 'oki. Ma kahi e 'oki ai kekahi kahuna, malaila mai no ho'i kekahi kahuna e 'oki ai, a pela no e 'oki palua ai a puni ke kumu o ke koa a hiki i ka hina ana. I ka hina ana, ho'omaha na kahuna. Alaila, lele mai la kekahi wahi manu 'u'uku. A holoholo mai hope a hiki i mua, a lele aku, alaila maika'i kela wa'a, 'a'ole kinā. A ina e holoholo 'ua wahi manu nei a 'aki'aki i ke koa, alaila, he koa puhā kela. A ma kahi no i 'aki'aki ai ka manu, malaila no ke kinā o ka wa'a. O keia wahi manu, he wahi ho'ailona mau no ia i na kahuna a pau o ka wa kahiko, i ka papa kahuna ali'i a me ka papa kahuna maka'ainana.

Ma keia wahi la, e na hoa, e kama'ilio iki a'e au. 'Ua 'olelo mai ka po'e kahuna o ka wa kahiko he manunu pu wale aku no ka 'i'o o ka la'au. 'A'ole ho'i elike me ke 'oki ana'ku o ke ko'i kila, ke 'oki aku lele ka mamala. 'A no ka pakela kahuna no ka 'oia wa, a me ka ikaika maoli no lilo no na mea pa'akiki i mea 'ole. He oiai'o he wa ikaika i'o no ia o ka Lahui Hawai'i nei. 'O ka wa no paha ia e pa'a ana na niho i ka pae niho. I keia wa la 'ua muka'e, a nolaila 'a'ole he ikaika, 'ua nawaliwali.

E na hoa, e ho'i a'e kakou e nana i ka la'au koa e moe loli'i mai la. A i na kahuna 'ua maha a'e la paha, a 'ua lele aku la kahi kilokilo. 'O ka hana i koe, o ke 'oki i ka eulua a mē na 'ano lala e a'e a pau. O ka lala kamahele 'oia ka lala kaulana o ka wa'a. 'O ke 'ano o keia lala he lala kilou aku i kekahi kumu la'au oko'a.

Ma'an'e'i hou la, e na hoa, e kama'ilio hou a'e kakou i kekahi wahi mo'olelo e pili ana no kekahi lala kamahele. I ke 'oki ana a Niheu i kekahi koa wa'a a hina, hele aku la 'oia a malalo pono o ka lala kamahele, pe'e iho la 'oia malaila. Hiki mai ana na 'aumakua i kumaumau ana e ho'ala i ke koa aia nei, a no ke ala 'ole, huli hele mai ana ka luna o na 'aumakua i kahi i pa'a

pork was cut up. When all was ready, then the head of all the priests prayed by calling on the names of the 'aumakua. After praying, the 'aumakua ate their portion. The priests at theirs. After eating, the work began.

- Now, O companions, we are nearing the trunk of the koa tree.

II. Cutting and hewing. The experts ate their fill till their stomachs were heavy, then the cutting began. They stood with the stone adzes all around the trunk of the koa tree, then began to chop. Where one expert chopped, the other expert also chopped and thus they cut in pairs all around the trunk of the koa tree until it was felled. After it was felled the experts rested, then a little bird flew down. If it ran from one end (of the trunk) to the other and flew away, then the canoe would be a good one; one without a blemish. If the little bird ran along and pecked at the koa, then it was a koa tree with rotten core. Where the bird pecked there the blemish was. This bird was a customary omen for all the experts of old, in the class of royal builders and the class of common builders.

Here, O companions, let me digress a little. The experts of the olden times said that the wood of the tree came off in fine pieces. The cutting was not like the cutting of the steel axes, in which the chips flew when cut. Because there were many builders at that time and because they were very strong, hard things were as nothing (to them). True, it was the time when the Hawaiians were indeed strong. It was perhaps the time when the teeth of the people remained firm. Now-a-days, there are bare gums and so there is no strength left, only weakness.

O companions, let us turn back to look at the koa tree lying prone. The experts were rested and the bird that had given its signs had flown away. The thing that remained to be done was to cut off the leafy branches and all other kinds of branches. The *kamahele* (traveling branch) was an important branch for the canoe. This kind of a branch was one that hooked into another tree.

Here again, O companions, let us discuss the story of a certain "traveling" branch. When Niheu had cut down a certain koa tree for a canoe and felled it, he went directly under the "traveling" branch and hid there. The 'aumakua came and made an effort to stand his koa tree up again and because it could not be raised, the 'aumakua who was the overseer went around seeking

ai. I lalau iho ka hana e huki a'e, e hopu a'e ana o Niheu pa'a. 'A o auhe'e aku la noia o na 'e'epa a pau. I iho ana o Niheu, "Make 'oe ia'u." E olelo a'e ana kela, "Make au, 'aole e pau ou mau wa'a i ke kalai," a pela'ku.

Ma'ane'i la, e ho'omaka kakou i ke kalai ana. Ka mua, ka uhau mai mua a hope, uhae aku mai hope a mua. Omilo aku ia hope a me mua. Pau ia, kikoni aku mai hope a mua. Pau ia, hahau ka alihia niao o ka wa'a. Pau ia, kupa ka waha o ka wa'a mai mua a hope. Pau ia, ho'olala na pepeiao o ka wa'a. Pau ia, kupe na 'aina ma na 'ao'ao. Pau ia, hehu i na 'aina oloko o ka wa'a. Pau ia puaka i ka momoa o hope a me mua. Pau ia, pu ke kaula. 'O ke kaula mamua o ka wa'a, ka pu ia, o ke kaula mahope ka 'umi'umi ia. Alaila, o ke kauo wale no ka hana i koe.

III. Ke kauo ana o ka wa'a. I ka wa e kauo ai ka wa'a, ina he wa'a no ka papa ali'i kuahaua ia na kanaka a pau. Na kane, na wahine, a me na kamali'i no kekahia, hali ka pua'a, ka 'ilio, ka i'a, ka 'ai i uka. I ka la e kauo ai, 'ai a maona, alaila o ka ho'omaka no ia o ke kauo. Ke ho'omoe ia mai la ka laina o na kane mamua o ka huaka'i, na wahine mai, na kamali'i mai. A, mahope kekahia mau kanaka ma ka 'umi'umi o hope. I ka wa e kauo ai, kahea mai ka mea ho'oulu kauo ma ke kahea ana ma ke mele. A pela no e hana mau ai a hiki i ka puka ana o ka wa'a i kai.

'O ka po'e pale 'oia kekahia po'e e pono ai ke hiki ka wa'a ma kahi pali lele koa'e, kahi e hiki 'ole ai i ka po'e kauo ke kauo. 'O ka po'e pale, he po'e akamai loa keia a 'ailolo ma ka lakou oihana i 'ike. He mea 'ole ia lakou ka pali. Ke hiki ka wa'a ma kahi pali ina he 50 anana 100 anana ke ki'eki'e, ilaila e 'ike ia'ku ai ke akamai o ka po'e pale. Elua pale, mamua a mahope, e pili ana ma ka 'ao'ao, e ho'ohuli ana i ka wa'a i-o i ane'i a kahi e huli ai ka wa'a pela no laua e huli like ai. Ina mana'o e ho'opa'a i ka wa'a, ho'opili a'e no i ke kuli i ke kio pohaku, ka pa'a no ia. A pela no e hana ai a hiki ka wa'a ilalo, alaila, ho'omaka hou ke kauo ana a hiki i ka puka ana o ka wa'a i kai a komo iloko o ka halau wa'a.

He mea le'ale'a loa no ke kauo wa'a o ka wa kahiko i na kane, wahine, a me na kamali'i 'oia manawa. Ina ka oihana kalai wa'a o ka wa kahiko, 'ua maopopo ke kokua ana o ka po'e

to find what held it fast. When he reached the place to pull it up, Niheu caught and held on to him. All the other supernatural beings fled. Niheu said, "I shall kill you." The other answered, "If you kill me, your canoes will not be made," and so on.

Here let us begin with the hewning. First, smite from bow to stern and strip off (the bark) from stern to bow. Taper the stern and bow. When done, dub out from back to front. When that is done, outline the edges of the canoe. When that is done, dub out the opening of the canoe. When that is done, design the cleats inside of the canoe. When that is done, cut out the chips on the sides. When that is done, remove the refuse inside of the canoe. When that is done, bind fast to the knob, (at the extremity of the rough canoe body) behind and in front, and when that is done, fasten on the ropes. The rope in front of the canoe is (called) a *pu* and the rope in the back is (called) the *'umi'umi*. Then only the hauling was left to do.

III. Hauling the Canoe. At the time of hauling the canoe, if it was a canoe for a chief, a proclamation went to all the people. Men, women and children, too, brought pork, dog, fish, and poi to the upland. On the day of hauling, they ate until satisfied, then began to haul. The lines were arranged with the men in front of the procession, then the women and then the children. Some were at the rear with the back rope. At the time of hauling, the one who inspired those who hauled called out to them in chants. This was done continuously till the canoe reached the shore.

Those who watched out for accidents were a great help when the canoe came to a steep precipice where the haulers could not pull. These watchers were very clever and experts in the work they knew. Cliffs were nothing to them. When a canoe came to a cliff fifty or a hundred fathoms high, there the skill of these watchers was seen. There were two watchers, (one) in front and (one) behind, close to the sides, who turned the canoe this way and that and where the canoe turned they also turned at once. If they wanted to stop the canoe they pressed their knees against a projecting stone and held it fast. They did thus till the canoe reached below, then the hauling began till the canoe arrived at the shore and entered the canoe shed.

Canoe hauling was a great sport in the olden days for the men, women and children of that time. In the canoe making art of olden times, it was understood that the *'aumakua* assisted when

‘aumakua ma ke lele ana o ka wa‘a i ka pali me ka nahaha ‘ole a po‘ino ‘ole.

IV. No ke kapili ana o ka wa‘a. ‘O ke kapili ana ‘oia ka hana hope loa. ‘Ua malo‘o a‘e la ka ‘i‘o o ka wa‘a, alaila o ka hana mua o ka ho‘oma‘ema‘e hou ia loko a me waho. A pau ia, ‘anai mai me na pohaku kalakala. A pau ia, ho‘oma‘u ka wa‘a i ka wai, alaila, wehe na ‘ao‘ao o ka wa‘a i ko‘o ia me na papa la‘au elua ma kela ‘ao‘ao a ma keia ‘ao‘ao mai hope a mua. Waiho malie pela a hiki i ka wa e pa‘a ai na ‘ao‘ao o ka wa‘a. Pau ia, houhou ka puka ‘aha o ka wa‘a mai hope a mua. Ho‘okomokomo ka iwi la-i ma na puka a pau.

‘O ka la-au e kapili ai me ka wa‘a, ‘oia ka la‘au ‘ahakea. He la‘au huli nui ia no keia a kahuna a ka la‘au e pili ana ma kela ‘ao‘ao a me keia ‘ao‘ao o ka wa‘a. Houhou no ho‘i ka puka ‘aha ma ia mau la‘au mai mua a hope, ho‘okomo ka iwi la-i. Pau keia, ho‘opilipili mai mua a hope; kau koa‘ekea, kauli mai mua a hope. Pau keia, ho‘okomokomo ka ‘aha ma na puka a pau mai mua a hope, alaila, o ka noho like no ia o na kahuna a pau ma na ‘ao‘ao o ka wa‘a. Ho‘okahi la ‘ua pa‘a.

‘O ka po‘e hilo ‘aha o ka wa kahiko, he po‘e oko‘a no ia. ‘O ka ‘aha e hana ia ai i kaula no ka wa‘a no loko mai no ia o ka pulu niu, he mea kuai nui ia keia i ka wa kahiko.

‘O ke ama o ka wa‘a, ‘oia ka wiliwili. A ‘oia no ke ama maika‘i loa no ka wa‘a. He po‘e oko‘a no ka po‘e kalai ama, a he mea kuai nui no ia i ka wa kahiko.

A pa‘a ka wa‘a i ke kapili ia, ho‘okomo ka wae hoā a pa‘a. Puhi ka inika hamo o ka wa‘a, ka uhaloa, ka hili, ke ki, ke aka‘akai. Alaila, ‘ua makaukau e hamoia a pa‘a. Ma‘ane‘i ‘oe la e, e ‘ike aku ai i ka nani lua ‘ole o ka wa‘a. Alaila, o ka hoā no ia o na ‘iako a me ke ama o ka wa‘a. Kukulu kia o ka o o na pe‘a, huki ke kaula pahe‘e, o ka hoe uli, a o ka holo aku la no ia maluna o na ‘ale lipolipo o ka moana.

Ina he wa‘a hou, holo mua e ho‘au lawai‘a. A loa‘a ka ī‘a mua, ho‘i mai kahukahu me kahea a‘e i na ‘aumakua.

the canoe went over the cliff without smashing or being harmed.

IV. Fitting the parts of the canoe. Fitting the parts was the last thing to be done. After the wood of the canoe had dried, then the first thing to do was to clean again the inside and outside once more. When that was done, it was rubbed with a rough stone. When that was done the canoe was soaked with water, then the two wooden slabs that were used to prop it on either side from stern to prow were removed. It was left alone until the time when the sides of the canoe were finished. When that was done, holes were bored for the sennit cords from stern to prow. Ti leaf stems were inserted into all the holes. The wood used in fitting on the canoe was the '*ahakea* (*Bobea* sp.) wood. This was a wood much sought by the builders to fit in on either side of the canoe. Holes also were bored into those pieces of wood from front to back (and) ti leaf stems inserted. After this was done, they were fitted from prow to stern; adjusted and perfectly fitted from front to back. When this was done the sennit braid was threaded into all the holes from prow to stern and then the experts sat down together and finished the sides of the canoe. It was finished in one day.

The sennit braiders in the olden days were different people. The braid used as cordages in canoes was made of coconut husk fibers and was much traded for in the olden times.

The float (*ama*) of the outrigger was made of wiliwili (*Erythrina sandwicensis*) wood. This made the best float for the canoe. Different people hewed out the floats and these were much traded for in the olden days. When the piecing of the canoe parts was done, the thwarts (*wae*) were put in (and) tied firmly in place. The blacking (material) to rub onto the canoe was set on fire, the *uhaloa*, (*Waltheria americana*), kukui bark, ti and bulrush (*Scripus lacustris*). Then when all was ready, it was rubbed all over the canoe. Here you will notice the unequalled beauty of the canoe. Then the booms ('iako) and the float (*ama*) of the canoe were tied on, the mast for the sprit of the sail erected, the rope (sheet) pulled taut, the steering paddle (added) and away it sailed on the deep blue waves of the ocean.

If it was a new canoe, it was first taken on a fishing trip. When the first fish was caught, it was brought back and offered with a prayer to the '*aumakua*.

HAWAII'S DISCOVERY BY SPANIARDS THEORIES TRACED AND REFUTED

By JOHN F. G. STOKES

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INTRODUCTION

As soon as Captain Cook discovered the Hawaiian Islands, opinions began to arise that they had been found previously by Spaniards. Having been born the theory grew, fostered by persons of great name repeating what had been said already and adding to it until, by very accumulation and weight of authority, the theory was accepted as history.

These great authorities included many foreign geographers of note as well as local historians. Of the latter, the most influential in spreading the doctrine of Spanish discovery of Hawaii was a Swede, Judge Abraham Fornander, whose opinions received strong support from Dr. W. D. Alexander, of missionary extraction. Yet Fornander stated [17, p. 110],* Alexander [1] agreeing, that "No traces of such [Spanish] influence can now be found in the religion, knowledge, customs, or arts of the Hawaiians."

In the long list of authorities were the names of many otherwise critical students, despite which 130 years passed before the theory was challenged. Another Swede, Dr. E. W. Dahlgren, librarian of the Royal Library at Stockholm, who had accepted the opinion as one well established, was led to look into it. He examined every account of early Spanish voyages and every early map of the Pacific region which he could obtain, and read every theory of the Spanish discovery. The amount of material available to him was enormous, and was summarized in a quarto volume of 222 pages in addition to reproductions of many charts and maps [12]. Dahlgren's conclusion was startling and revolutionary, in contrast with the opinions so widely held, but was definite. He said:

No historical fact proves, nor is there any sort of probability, that the Hawaiian Islands were ever visited, or even seen, by the Spaniards before their discovery by Captain Cook in 1778.

Copies of Dahlgren's memoir, published first in 1916, may

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* References are indicated by numbers in brackets, and are listed at the end of the paper.

be found in several local libraries. With other data in support, its principal points were summarized by Bishop H. B. Restarick in 1930 in a local essay, privately printed [37]. In addition the fourteenth edition of the Encyclopedia Britannica states that the theory has been exploded.

Despite its refutation for over twenty years by most competent and impartial authority, the theory still remains history, apparently, according to some of our current text books, recent authors, pseudo-historical magazines and business firms which may desire to be helpful.* As authoritative statements, issued for public information, we find today at the top of many chronological lists these two items :

- 1527. Probable arrival of shipwrecked Spaniards.
- 1555. Discovery of Hawaiian Islands by Juan Gaetano or Gaytan.**

Since the publication of Dahlgren's and Restarick's studies, certain points in support of the Spanish theory have been examined and clarified [43; 44]; in addition, several very important references from Spanish sources have been obtained. The new evidence, when analyzed, not only supports Dahlgren's conclusions fully, but makes it possible to explain the origin of the most widely accepted of the theories.

The present paper, prepared for local information, is based on Dahlgren's extensive researches, on which free levy has been imposed. In fact, without such as a source book, the paper could not have been prepared in Honolulu. The plan is a review and evaluation of the principal theories point by point in chronological order as promulgated. If the representations which follow be unacceptable, more and fuller detail will be found in the studies mentioned, or the references indicated.

* A gentleman interested in Hawaiian history, who has published several early journals at his own expense, made an offer some years ago of \$1000.00 for proof that these islands had been discovered by Spaniards. He states that so far none has claimed the money.

** Such persistent repetition, as history, of opinion unproved by the authors, yet disproved by authority, may express merely the urge for romance or yielding to its demand. Romance, inseparable from "castles in Spain," Spanish voyages and islands of the South Sea, has often served in Hawaii as history from the earliest-preserved prehistoric accounts by the natives to successions of books and narratives of later days. It may be that, if offered as romance, its unreality fails to satisfy; if as history, we are then in the realm of the marvellous, which is what we and many of our tourists seem to desire.

The "must" theory. As the first point may be introduced the most wide-spread and persistent idea, overshadowing all the theories, that since the Spaniards were crossing the Pacific Ocean between Mexico and the Philippines for two and a half centuries before Cook's time, they *must* have seen the Hawaiian Islands in passing. Examined on a modern map, it seems plausible enough but, after consideration of the facts, is found to lack support.

The first crossing was by Magellan in 1521 from Europe by way of the straits bearing his name. Another expedition followed the same route. Then three voyages were made from Mexico, the last, in 1564, resulting in the occupation of the Philippines. All these, as indicated, were from east to west. Their accounts are preserved and they mention no islands identifiable with the Hawaiian Islands, the meridian of which was passed well to the south.

Unsuccessful attempts were made by the earlier voyagers to return by a route to the north. However, of the last expedition, two of the vessels in 1565 did succeed and passed the meridian of the islands in 40° north latitude, or over a thousand miles distant.

Then, and for centuries to follow, sailing routes were dependent mostly on favoring winds and currents, and but little on the limited maneuvering capabilities of the ships and sailors. Furthermore, the winds being seasonable, the seasons controlled the time of sailing. South of Hawaii and running due west is a strong current, over which the north-easterly trade winds blow much of the year. With these favoring conditions the Spanish authorities soon issued directions to sail due west in a belt between 13° and 14° N. This is about the latitude of Guam, which was the supply station and thus would not be missed, while the route avoids the many low islands and shoals of the Marshalls and Carolines. "All the sailing directions that have been preserved prescribe this route," Dahlgren remarks, and being royal orders the course would be maintained if humanly possible. La Perouse indirectly confirmed this in asserting that for 200 years previously no vessels but Cook's and his own "have quitted the track pursued by the galleons" [23, p. 233]. Thus when communication between Mexico and the Philippines became regular (one or two vessels nearly every year), they passed at about 350

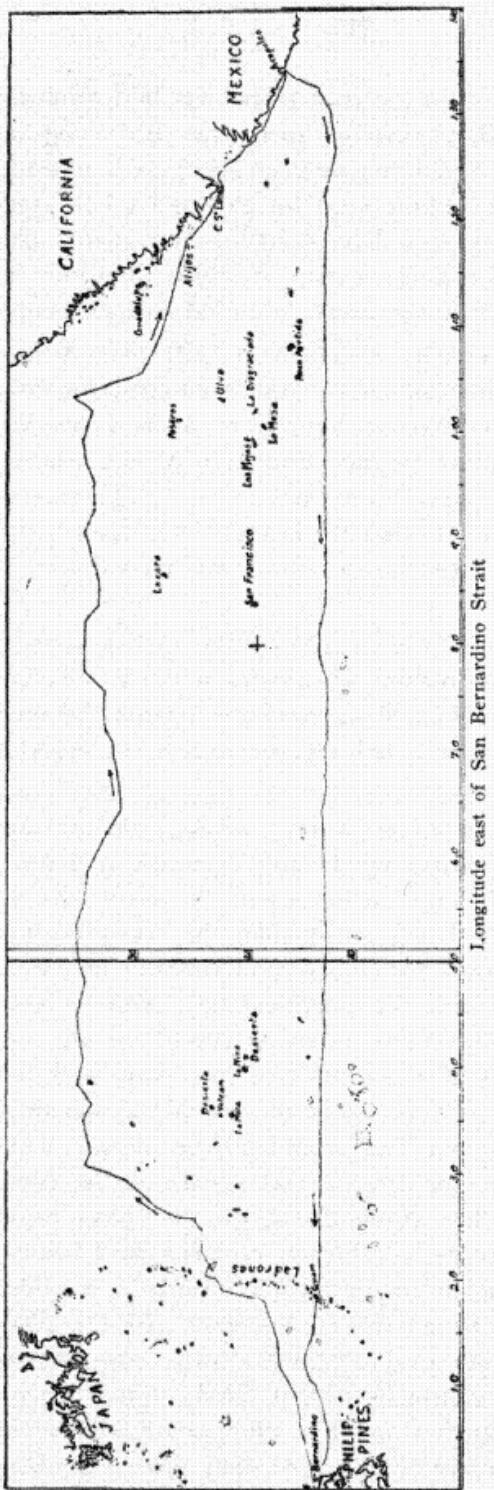


Figure 5. "Chart of the Spanish Galleon" from Anson's voyage; basis of theories that early Spanish navigators discovered the Hawaiian Islands. Correct site and size of island Hawaii, indicated by addition of cross at $19^{\circ} 30' N$. and $160^{\circ} E.$, is remote from galleon's course (Manila to Acapulco and return) as chart shows. "Monges group," with misspelled names Los Mojias, La Mesa and La Disgraciada (alleged to

be Hawaiian Islands), and all islands in vicinity, are map misplacements—some as much as 80° of longitude. Anson corrected width of ocean in Spanish chart by adding about 10° between 50° and 60° E., thus moving San Francisco island etc. more eastward. In figure 5, Anson's delineations are followed, with many names omitted and spelling of some corrected.

nautical miles to the south of Hawaii island, and beyond any possibility of sighting it.

The northern route changed but little, and seemed to average at about 35° N. The route of a galleon's voyage from Manila to Mexico and return in 1742 and 1743 is shown in figure 5.

Time consumed in the western voyage with its favorable conditions was two to three months. The eastward voyage required four to seven months. Facilities for carrying fresh supplies and water were very limited and the death rate from scurvy was heavy. Thus one may be sure that the primary consideration was the completion of the voyage, and little thought was given to exploration or departure from the course.

Nevertheless, authorities both ecclesiastical and secular urged a search for unknown islands and people. To succor the travelers,

Spain was led to explore the Californian shores to find safe harbors where the scurvy-stricken crews might recuperate, as may be seen by the Royal Decree of 1602, ordering the Manila galleons to put into the harbor of Monterey for this purpose, [51, p. 31].

Monterey had just been discovered.

But even greater than this urge, induced by dire physical needs, was that of the higher command which at the period closely coordinated the cross and the sword. To quote from Burney:

The zeal of the Spaniards for conversion was not confined to the ministers of the Church; among the discoverers of that nation generally, it has been only less predominant than the spirit of Conquest. The ordinances contained in Pope Alexander the VIth's Bull of Partition are addressed equally to the secular and to the spiritual sons of the Roman Church.

"That the Catholic Faith and Christian religion should be exalted and every where be spread, and the salvation of souls be obtained, and barbarous nations be subdued and brought to the Faith . . . The people living in Islands and lands of this sort, you will and ought to bring to the Christian Religion: nor let perils nor labour at any time deter you."

Consonant with this were the feelings of the early discoverers. In the second voyage of Mendana, when at the Islands which he named *las Marquesas de Mendoza*, we are told that nothing caused the discoverers so much regret as the leaving behind them so fine a people to perish. [9a, III, 271-2]

The Pope's edict was in 1493. In 1559 King Philip ordered that preparations be made for the conquest of the Philippines, and that with the expedition should be sent:

"holy guides to unfurl and wave the banners of Christ in the remotest parts of those islands, and drive the devil from the tyrannical possession which he had held so many ages, usurping to himself the adoration of those people." [9a, I, 250]

Priests accompanied every expedition, and many could not be

restrained from leaving the vessels at the Ladrones to convert the natives [12, pp. 44, 52, 55]. Once these islands were formally occupied and the mission under way, one of its members addressed memorials to the viceroy of Mexico, asking for help:

"to save the people from the diabolical superstitions of idolatry and witchcraft . . . to cover the many islands as yet in the shadow of death . . . To reconnoiter for islands which may serve as stepping stones for the island of Guam to very near Peru . . . in a matter of so much importance as the redemption of souls and thus to bring one vast Catholic community beneath the sway of the Catholic Crown [Spain]." [37, p. 18]

Soon after the island of Tahiti was discovered by Wallis, the viceroy in Peru was ordered to send there and investigate. In 1772, he placed two priests and an attendant on the island, with the following instructions, in part:

The chief aim of our sovereign Royal Prince in reference to the island [Tahiti] is the rescue of the natives to a knowledge of the true God and the profession of the Catholic religion, besides securing by means of an effective occupation that no other nation shall possess itself of said island. His Majesty resolutely wishes to form a settlement with a prudent officer in command under the aegis of whom this much desired object shall be promoted by the clerics." [37, p. 19]

Tahiti is about the same size as Oahu. The area of the Ladrones is 420 square miles, and that of the Hawaiian Islands over 6,500 square miles. With the very apparent pressing need of a ship-supply station in mid-ocean, and the still greater urge for unknown lands to convert and conquer, does it seem likely that the Hawaiian Islands once seen by the early Spanish navigators, would have been allowed to lapse into oblivion?

The fact is (pp. 85 ff.), as soon as their value was realized by the Spanish, their occupation and conquest by Spain were recommended in 1789 by a Spanish officer, but failed of endorsement by the viceroy on account of certain details. The latter, however, sent another officer to reconnoiter these islands and make friends with the people, and received from him a similar recommendation. The European situation probably prevented further action by Spain.

Thus against the "must" theory, based on fancy, may be placed the records that the tracks of the Spanish vessels led away from and not to the Hawaiian Islands, that Spain eagerly sought islands of such a class for nearly three centuries, and that Spanish officials initiated movements to obtain them when known.

Yet, although so utterly untenable, the "must" theory has had and still has great influence. It affected many of Cook's com-

pany as soon as they sighted these islands and caused them to interpret some of their observations as evidence that the Spanish had preceded them.

Mendana's island or San Francisco Island. The position of this island on the early charts (figures 5 and 11) is so close to the true position of the Hawaiian Islands that Wm. Harvey, masters-mate of the *Discovery* headed several successive journal entries "Mandana's Islands" on first reaching Kauai [18]. Lieutenant Burney, of the same ship, noted a similar suggestion [9]. On La Perouse' chart, the draftsman marks it: "I. Sn Francisco which appears to be the same as Hawaii" [23, pl. 67].

When Mendana discovered the island he named San Francisco, he examined it in the hopes of obtaining drinking water. Three of the journals are in agreement (supported by the fourth) that the island was low, had a lagoon fed by the sea, was uninhabited except by sea birds, but had no drinking water. Variation in the accounts gave it a vegetation of "bushes" or "brambles," a circumference of 2, 7 or 8 leagues, and a latitude of $19 \frac{1}{3}^{\circ}$, 20° or 21° north. Thus this single island of San Francisco, as described by its discoverers, has no point of identification with any of the Hawaiian Islands except in latitude. It has been identified as Wake Island [29].

Iron implements. Iron knives were found in the hands of Kauai natives on Cook's first visit, the published description of which was "a piece of hoop iron, about two inches long, fitted into a wooden handle," and an edged tool "which our people guessed to be made of the point of a broad-sword." These statements have been caught up and repeated by every proponent of the theory of Spanish discovery of these islands, but generally twisted to appear that Cook *did find part of a broad-sword*.

Following examination of unpublished journals written on the voyage, these two knives have been identified clearly as Japanese, washed to shore and probably in their original handles [43]. Japanese vessels, wrecked or in distress, were to be expected in the region [45]. The natives' accounts recorded were also unanimous that all iron previously received came from the sea.

Not included in the study just referred to is a note in the journal attributed to Surgeon John Law of the *Discovery* [24]—

a journal generally neglected as containing much that was copied from others. At Kealakekua Bay (it runs), "piece of old iron brought to C. J. C[ook], supposed to be an old breech pin of a gun, tho. quite beat flat," No other journal mentions it. The date was February 12, two days before the death of Cook whose journal had not been entered for a month.

Failing comment by King and Burney, both of whom were convinced that the Spanish had preceded them to these islands, it would seem that the iron object had been obtained from Cook's ships with the many other pieces of the material eagerly sought by the natives. Identification of other iron objects in native hands had been faulty [43], so that Law's might be accepted with reserve. Yet, the question of identity must remain open until possibly settled by some journal yet unseen.

Forms of feather cloaks and helmets. The form of Hawaiian feather cloaks is said to resemble that of the Spanish mantle of the sixteenth century. Such no doubt is true, and also of England, France, Holland and other parts of Europe in that period as well as earlier and later. The form of the dress is too simple and widely distributed to base theories on it.

As a matter of fact, the Hawaiian feathered dress is represented by at least three forms which themselves are connected with intermediates. (a) The shoulder cape, fitting closely to the neck and meeting in front. It is common in Hawaii and the form had its counterpart in New Zealand and other parts of Polynesia, as well as British Columbia. (b) A rare form in Hawaii is a sub-rectangular piece, similar in size and shape to the New Zealand feather robe. (c) The third form is the cloak, tied loosely round the neck and sometimes reaching to the ground. This mantle might readily have evolved from the cape, either with or without the aid of the second form, and the theory of its derivation from foreign sources seems an unnecessary explanation.

A stronger argument for pre-Cook Spanish or European intercourse with these islands is the presence here of the crested helmet. Fornander [17, p. 110] states that traditional references assign to it a time preceding the foreigners' arrival and he implies that it had a Polynesian origin. A close review of the literature by the writer [42] in 1920 showed very definitely that the helmet form had no connection with Polynesia outside the Hawaiian

Islands. Then, on the analogy of certain patterns of Hawaiian hair-dressing, the theory of local evolution was offered. A re-examination of the material has since suggested the advisability of leaving the question open.

The form of the Hawaiian helmet is distinctly reminiscent of certain Greek, Etruscan and Roman helmets in the erect front of the crest and general skull contour, but it differs in other features. Yet it is closer to those forms than to the Spanish morion of the sixteenth century, to which it is generally referred. Were the theory of local evolution rejected and European influence insisted upon, some other proto-type than the Spanish morion must be sought.

In any case, were European influence present, with the tendency of the Hawaiian helmet to lean away from the Spanish type, the specific points of similarity should be pointed out by those who claim that one was derived from the other.

Crosses. At two places—the north coasts of Maui and Hawaii—natives visiting the ships crossed their fingers and pointed ashore. Each of the observers, Burney [9] and Samwell [39], interpreted the motions as indications of crosses erected ashore by Spaniards. They knew of the cross so set up at Tahiti. Yet at no place in the Hawaiian Islands did Cook's people find such a cross.

At the time, it may be remembered, Cook and his people were regarded as gods, and Cook was Lono-makua—the new year god. Also, Cook arrived each time during the new year festival.

The representation of Lono-makua in his progress round the island was like the Christian cross, and was hung with banners and other objects. Also in use, as a very sacred sign of prohibition marking the boundaries of temples, was the diagonal cross, *crux decussata*, commonly known as St. Andrew's. Possibly, in making the signs, the natives indicated one of the crosses mentioned.

Of Cook's officers, the best case for the theory of Spanish discovery of these islands was made by King, who published his remarks in the third volume describing the voyage [11]. It created little notice of itself, but soon served others as a foundation for theories unlimited which followed.

La Perouse. The best known theory of the time, and that most widely discussed, was formulated in 1786 by the French

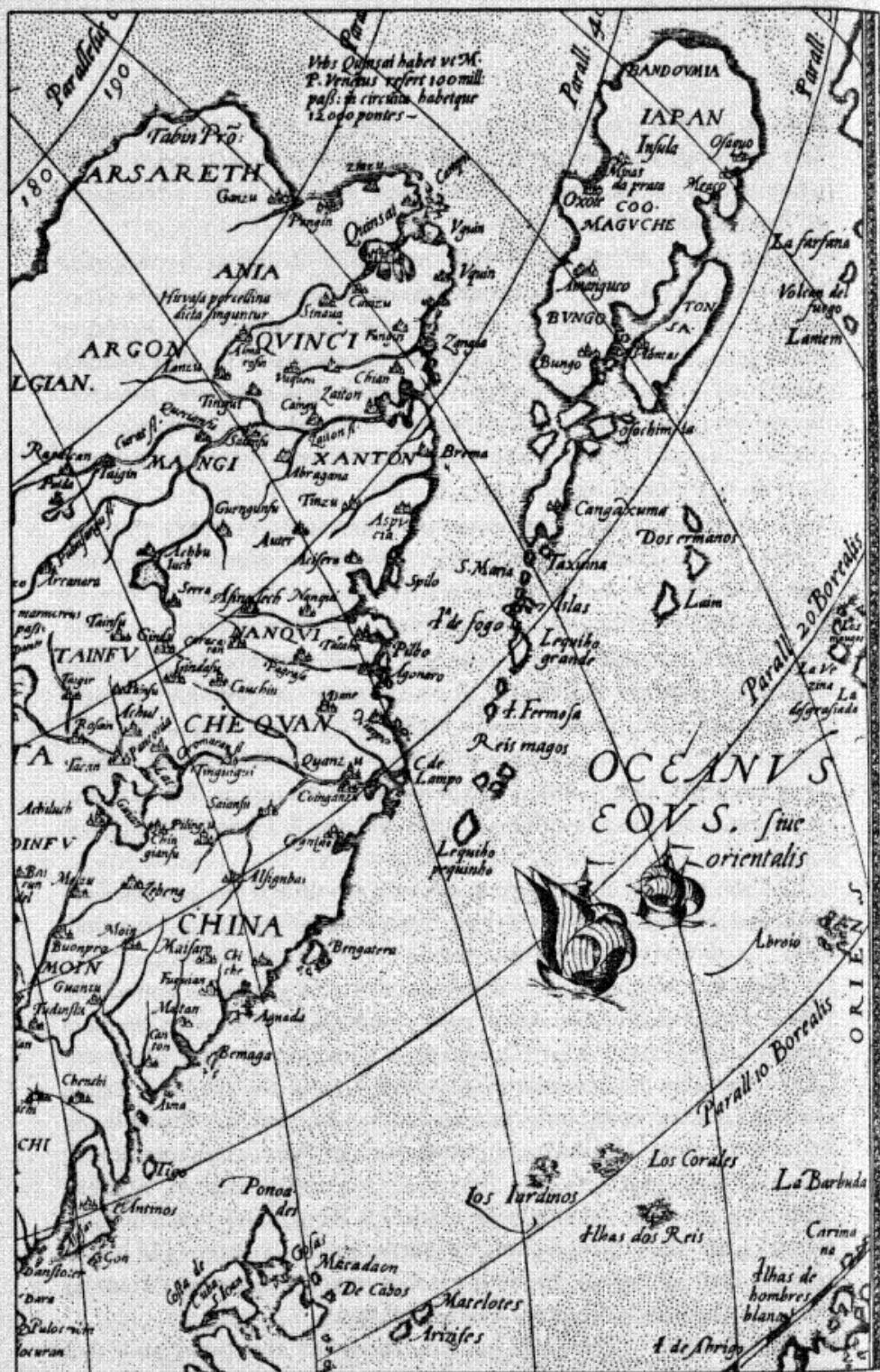


Figure 6. North Pacific in ASIAE NOVA DESCRIPTIO by Ortelius, 1570. Lower California at upper right and Monges group at right center.

explorer La Perouse [23, I, 85-93], and elaborated by his patron Fleurieu when editing Marchand's voyage [26a]. It rests on the chart-presence of a group of islands (hereinafter called the Monges group) between 10° and 20° eastward of the position of the Hawaiian Islands and in the same latitude. Under the names Los Mojás, La Mesa and La Disgraciada, the islands of the Monges group had been observed, without explanatory remarks, on a chart published in the account of Anson's voyage [50] and said to be a copy of one captured from the Spanish in 1743 (cf. figure 5).

La Perouse had searched for the Monges group, and sailed over its position without finding land. Continuing his western course to Maui, he there found that his dead reckoning placed him 5° too far to the east. These circumstances decided him that the Monges group represented the Hawaiian Islands misplaced on the map by the early Spanish navigators on account of the difficulties of the period in reckoning longitude.

Confirmation of this opinion was found in the name La Mesa —on the chart, the southern island of the group. The name meaning "table", La Perouse identified La Mesa as the island Hawaii on account of its southern situation and the alleged flatness of the dome of Mauna Loa.

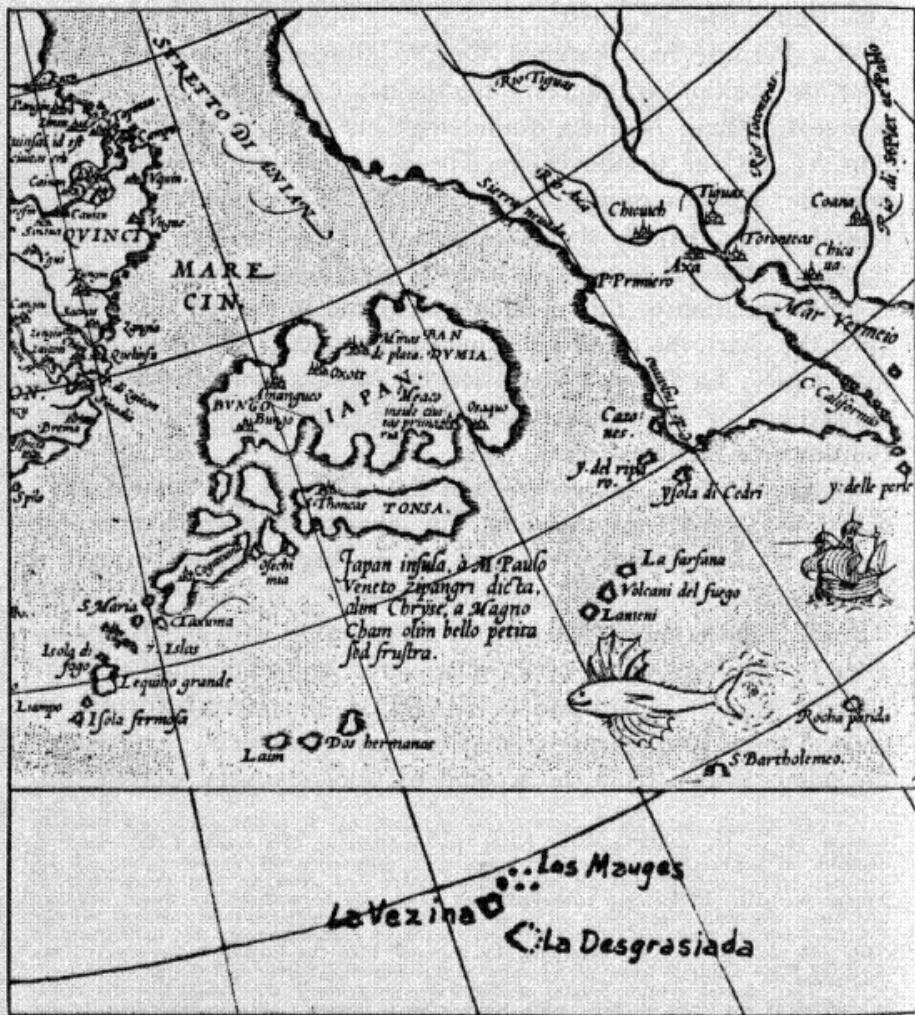
Observing also an account that the Spaniard Gaytan* in 1542 sailed westward from Navidad (in latitude of Hawaii) for 900 leagues** (approximate distance to its site) and discovered a group named Reys [Kings] Islands in 9° , 10° and 11° north latitude, La Perouse identified the Reys group with the Hawaiian Islands, naming Gaytan as the discoverer, and explaining the difference of 10° in latitude as possibly a purposeful attempt to conceal these fertile islands from foreign freebooters. Of course, the points drawn from the account of Cook's voyage were added.

* The Gaytan reference appears not in the body but in a footnote to La Perouse's journal, which his editor annotated freely for publication. Its wording has raised a question of authorship, for which, however, a succession of events points to La Perouse: The explorer and all his company were lost after he sent his journal to France in 1788. It was not published until 1797. He formulated his theory in 1786 and later, the same year, was on most friendly terms with Spanish officers on the Pacific coast of America. These officers, or their contemporaries, by indirection in 1789 and directly in 1792, associated La Perouse with the Gaytan reference and the dates of their writings leave no question of La Perouse' authorship of the footnote.

** The Spanish marine league of the sixteenth century was 3,4286 marine miles, calculated at the rate of $17\frac{1}{2}$ such leagues to a degree. This is according to the scale on a chart by Burney [9a, II, p. 9]. However, Wagner [49, pp. 119, 343, 371] is more specific, and says: ". . . at the rate of $17\frac{1}{2}$ leagues to a degree of the arc of a great circle." Checking on certain voyages between known points, Wagner [pp. 308, 331] found that some estimates of distances traveled made the league equivalent to one twentieth of a degree.

Thus the new points of La Perouse' theory are: (1) The position on an eighteenth century chart of an island group assumed to have been discovered in the sixteenth century, (2) The name La Mesa having an implied significance and being attached to the southern island of the group, and (3) An interpretation of incidents in Gaytan's voyage of 1542.

The first two points illustrate a common human failing, observable in the twentieth century as well as in La Perouse' time, of



[Adapted from Dahlgren.]

Figure 7. North Pacific in *TARTARIAE SIVE MAGNI CHAMI REGNI TYPUS* by Ortelius, 1570; Monges group added from figure 6.

projecting the horizon of the present into the past and building on the false foundation thus established. Insufficient consideration is given to the deficient geographical knowledge of the Pacific area in the sixteenth century as reflected by the maps of that period, and to the many changes since that time due to the increase of knowledge and the cartographers' idiosyncracies, a study of which will completely vaporize the theory. That La Perouse may have been neglectful in this matter is not surprising, because his ship's library must have been limited. On the other hand his editor, and Fleurieu, with the libraries of France conveniently at hand, had as full if not fuller opportunity of checking the evidence than we of later days. Their neglect has cast a cloud on the ability and judgment of La Perouse whose scientific reputation was such that he would be expected to discard or modify his theory had he survived to reach the European libraries.

Cartographical migration and merging of islands. Knowledge of the northern Pacific region in the mid-sixteenth century may be represented in part by the companion maps in figures 6 and 7. In them, Japan is delineated as nearly filling the ocean and (figure 7) the American and Asian coasts as only about 700 miles apart. A little earlier this narrow portion, known as the Strait of Anian, is shown as almost closed [49, pl. XVI], where still earlier the continents are pictured as joined. Of course, as is understood, this portion is drawn by legend and guess, because it was unknown to European navigators.

The southern part, although wider, is represented also as too narrow. The cartographers had to depend on the navigators who, in turn, although going remarkably well with the facilities of the time, were led into many errors nevertheless. Latitude was reckoned with fair accuracy, but longitude caused endless difficulties and disagreements even on the same voyage.

The first crossings of the Pacific by Spanish vessels, as already stated, were from east to west. A route south of the Hawaiian Islands was soon established in which the favoring current and winds made progress easy and rapid. As de Morga described it in 1609:

. . . generally at 10 or 11 degrees . . . they sail continuously before the wind, and without changing the sails . . . for 1800 leagues . . . This voyage to those Ladron Islands generally lasts seventy days. [12, p. 62]

Such favorable conditions and (for the period) fast sailing,

TABLE I
Variable longitudes illustrating movements of islands on successive early charts

Date	Map	China	Japan	West Japan	Fast Japan	Hermans	Ladronees	Monges	Bolcanes	California	C. Engano	C. Lucas	C. California	S. California	Ref.	
1. 1570	Ortelius	27°	25°	45°	27°		34°	43°	38°	50°	59°	11°	D			
2. 1570	Ortelius World	5°W	0°	12°	20°	30°		38°	22°	63°	77°	27°	D			
3. 1587	Gualle World	11°W	9°W	3°		18°			47°	54°	62°	58°	P			
4. 1589	Ortelius World	5°W	0°	12°	20°	30°	47°	38°	22°	61°	63°	77°	H			
5. 1589	Ortelius Pacific	2°W	0°	12°	13°	16°		33°	32°		83°	98°	C			
6. 1589	de Jode World	11°W	5°W	5°	25°	34°		43°	30°		69°	83°	41°	C		
7. 1594	Plancius World	1°W	7°	18°	28°	20°	70°		31°	85°	83°	106°	32°	D		
8. 1596	Porro World	8°W	1°W	11°	19°	29°		38°	27°		61°	77°	35°	C		
9. 1596	Blagrave World	2°	3°	15°	20°	18°		39°	67°	75°	81°	92°	65°	C		
10. 1599	Wright World	1°	6°	18°	22°	15°	92°		73°	98°	97°	104°	72°	C		
11. 1601	Herrera Pacific	3°W	1°	10°		19°			46°		69°	80°	49°	D		
12. ?1660	de Wit World	0°	8°	20°	31°	20°	79°		84°		96°	106°	84°	M		
13. 1709	Nolin Pacific	1°W	5°	19°	9°	19°	89°		95°			116°	96°	D		
14. 1716	Stockholm Pacific	5°W	4°	16°		20°	86°		95°	86°		113°	100°	D		
15. 1743	Anson Pacific		4°	15°		20°	102°		106°	102°			123°	A		
16. 1779	Cook World	5°W	7°	18°	22°	100°			112°	101°	122°	126°	117°	K		
17. 1786	La Perouse Pacific	3°	15°		20°	91°				91°				L		
18. ?	Anonymous Chart No. 1	4°W	4°	15°	21°	92°		112°	93°	122°	127°	116°	S			

caused an *under*-estimate of the distance travelled which is reflected in the maps by the erroneous narrowness of the ocean.

The return voyage, only possible at the period by a northern route, was rough, frequently with unfavorable winds, and for the many reasons given was dreaded by the Spanish as "the longest, most tedious, and most dangerous in all the seas." [12, p. 39]. Consequently, on this route the tendency was to *over*-estimate the distance traveled and longitude gained.

Thus, in relation to the American coast, the islands plotted on the westward course would be too far to the east, while on the eastward voyage the error would be doubled, because the starting point for the return was already plotted wrongly.

Increases in geographical knowledge led to successive map widening of the ocean, which may be followed partially in the maps illustrated herewith, but as the number available are too many to be reproduced, their story must be told by figures. In Table I, as will be observed, the cartographers widened the gap between California and China from 11° in 1570 to 117° in 1779. In the same period (Table II) the distance from San Bernardino Strait in the Philippines to Cape San Lucas increased from 59° to 125° of the meridians.

The figurative swirl in the ocean to be expected as the map makers pushed the mighty continents apart is reflected in the changes of position of the many islands plotted. In latitude, the movements are not great. However, the longitude assigned to the various islands will be found to increase or decrease on successive maps, or even to change with that of other islands (Table I). Combining the changes in latitude and longitude, the general effect is a migration towards the middle.

The Monges group itself was affected by yet another eddy in which the southern island on the eighteenth century chart first appears in 1570 as on the west of the group, and subsequently moves to the middle, the north and the east (Table II).

In following the various islands on successive maps, it has been difficult to forget the Hawaiian legend in which the "magic carpet" theme is represented by that of "floating islands" moving hither and yon at the direction of their resident spirits. But our cartographers could not have known of the legend, and possibly were affected by agoraphobia, filling the empty middle

TABLE II

The Monges group on successive charts illustrating the variation of its islands in number, name, situation within the group and, particularly in the last three columns of figures, the changes in the group's position and the increasing width of the ocean as geographical knowledge was gained.

Date	Map	Islands	Rock	Name	Position	Name	Position	S. Bermeardo	C. S. Lucas	Width of ocean	Comparative width of ocean	References
1. 1570	Ortelius Asia	3	4	n. Los Mauges	w. La Vezina	se. La desgraciada	34°	25°	59°	D		
2. 1587	Ortelius World	3	-	w. Monges	m. Vezina	e. Desgraciada	...	30°	...	Y		
3. 1587	Ortelius America	3	-	w. Los Monges	m. La Vezina	se. La Desgraciada	...	25°	...	Y		
4. 1589	Ortelius World	3	-	w. Monges	m. Vezina	e. Desgraciada	47°	30°	77°	H		
5. 1592	Plancius Planctius	3	-	w. Los Mangos	m. La Vezina	e. La Desgraciada	...	30°	...	W		
6. 1594	Plancius World	3	-	w. Los Monges	m. La Vezina	e. La Desgraciada	69°	37°	106°	D		
7. 1599	Wright World	3	-	w. Los Monges	n. (unnamed)	e. Las desgradiada	92°	12°	104°	C		
8. 1611	Hondius World	3	-	w. Los Mongos	n. La Vezina	e. La Desgraciada	...	35°	...	D		
9. 1624	Goes N. Am.	3	-	w. Les Moughes	n. La Vezina	e. La Desgraciada	...	28°	...	D		
10. 1630	Teixiera	3	3	w. *	w. Le Vezina	e. La desgraciada	...	?18°	...	W		
11. 1630	Gerritz America	4	2	(unnamed)	(unnamed)	(unnamed)	...	20°	...	D		
12. 1641	Sanchez Pacific	4	2	w. manges	se. lavezina	m. desgrasiada	...	...	...	D	
13. ?1660	de Wit World	3	-	w. Los Monges	n. La Vezina	e. La Desgraciada	79°	27°	106°	M		
14. 1685	Hacke World	3	-	w. Los Mauges	n. La Vezian	e. La des Gracida	...	...	...	D	
15. 1700	Devisle World	-	-	n. las Monges	w. las Vaginas	e. (unnamed)	...	28°	...	D		

16.	1705	Mortier	**	n.	los Monges	**				26°	....	W
17.	1709	Nolin Pacific Delisle	3	w.	Les Monges	n.	La Vezina	e.	La Desgraciada	89°	27°	116°
18.	1714	N. Hemis. Stockholm Pacific	3	..	n. los Monges	w.	la Vagina	e.	Guatiada	....	30°	....
19.	S.1716 {	Bueno, list	4	5	w. Los Monjos	s.	Mira	e.	La Desgraciada	86°	27°	113°
20.	S.1734	Pacific	4	?	w. Los Monges	s.	La Mira	e.	La Desgraciada	90°	23°	113°
21.	1743	Anson Pacific	4	4	w. Los Mojas	s.	La Mesa	e.	La Desgraciada	101°	23°	124°
22.	S.1770	Seville Pacific	4	4	Los Monges	(unnamed)			La Desgraciada	90°	33°	123°
23.	S.1773	Track of Buenfin	..	w.	Monges	e.	La Mira	e.	Ulloa	....	....	B
24.	1779	Cook World	4	..	w. Los Majos	s.	La Maso	e.	(unnamed)	99°	26°	125°
25.	1786	L.a Perouse World	5	..	w. los Monges	s.	la Mesa	e.	(unnamed)	104°	21°	125°
26.	1786	L.a Perouse Pacific	4	4	w. los Monges	s.	la Mesa	e.	La Desgraciada	91°	....	L
27.	S.1792	Bodega N. Am.	5	4	{ n. Monge	s.	La Mira	e.	Desgraciada	....	28°	....
28.	S. ?	Anonymous	4	..	{ w. Los Monges	s.	Mira	e.	La Desgraciada	92°	34°	126°
29.	S. ?	Chart No. 1	4	4	{ n. (unnamed)	w.	Monje	s.	La Mira	....	....	S
		Anonymous	4	4	{ n. Los Monges	w.	(unnamed)	e.	la desgraciada	....	....	S
		Chart No. 2			w. (unnamed)							

S=Direct Spanish source; N, s, w or e=Direction from middle (m) of group. Figures in fifth column=number of islands; in sixth column, of islets or rocks; all except two islands belong to Los Monges.* All named La Vezina but one island. *Part of map only. In the last three columns of figures, the meridian datum is the pass of San Bernardo as in the Chart of the Spanish Galleon. Letters in last column indicate references, or source. A, Waller [50]; B, Beltran [51]; C, Library of Congress; D, Dahlgren [12]; H, Hakuyt [17a]; L, La Perouse [11]; M, Bishop Museum; W, Wagner [49a]; Y, Zendtoorn [52].

portions of their charts, of which none had knowledge, with islands drawn from the margins.

Two cartographical studies, independent of one another, were conducted this century for the purpose of tracing the Monges group to the source of its naming. One, published in 1913, was by our local Father Reginald Yzendoorn [52], and the other by Dahlgren, already mentioned. Neither could find the Monges group shown on any chart or map earlier than that in Ortelius' atlas of 1570, partly illustrated in figure 6. Its continuity from this map to the Anson chart may also be traced in Table II. The



Figure 8. North-east Pacific in *Typus Orbis Terrarum* by Ortelius, 1570, in the same atlas as figures 6 and 7. Editions of this map in 1587 and 1589 include three islands, Monges, Vezina and Desgraciada, south-east of La farfana, and one, Paxaros, south-west of Y. de Cedri; dark spots mark the additions.

[From Dahlgren.]

map in figure 6, then, will serve well as a starting point for the Monges group's migrations.

In this figure, the group with N-S axis appears as 3 islands and 4 islets or rocks bearing in all three names, Los Mauges, La Vezina and la desgrasiada. Its latitude is between 17° and 20° N., and its position is due south of Japan. At about 27° N. and to the north-west and north-east are two other groups, which will be named the Hermanas and Bolcanes groups respectively. Both are also south of Japan, and consist of three islands. Of the Hermanas or western group, two are named Dos hermanos and the third Laim. Of the Bolcanes group, the island names are La farfana, Volcan del fuego and Laniem.

On the companion map in figure 7, the islands of these two groups are shown in slightly different positions, and with some mild changes in spelling the names, i.e. "ermanos" becomes "hermanos", "Volcan" becomes "Volcani" and "Laniem", "Lanieni." These changes, relatively insignificant of themselves, are of great importance to note because it is on the accumulation of such errors that the leading theories are founded.

To these companion maps may be added a third, figure 8, from the same publication. The Hermanas and Bolcanes groups have been moved southward to about 23° N. The first now consists of three islands named Las dos hermanas, and a fourth named Malabriga. The Bolcanes group has also increased to four islands, three of which in triangular arrangement are named Los Bolcanes, while La farfana has been moved to the south-east from its north-east position. Laim and Laniem have disappeared. Both groups are now to the south of the American coast, while Japan is shown at the other margin of the map. The Monges group is displaced by Zamal and Restinga* di ladrones, the northern portion of what is called Archipelago di S. Lazaro, which is also placed south of the American coast.

But this San Lazaro Archipelago was the name first applied by Magellan to the eastern portion of the Philippine Islands, and in

* As the later maps will show, these prove to be the Ladrones Islands. However, the map conveation and the term *restinga* indicate "reefs or shoals"—not at all applicable to the high Ladrones. The revision in figure 9 changes the "reef" to a group of small islands, while retaining the term. Nevertheless, the modern Dictionary of the Spanish Language derives *restinga* from the Flemish *rots-steen* (namely, rock-stone) and defines the latter as *peñasco*. Again, *peñasco* is defined as a "large and elevated rock," *peña grande y elevado*, which negatives the usual definition of *restinga* as a submerged rock. On the other hand, the term *peñasco* befits the Maug Islets of the northern Ladrones (p. 73) and in 1570 *restinga* may have conveyed a different idea to that accepted later.

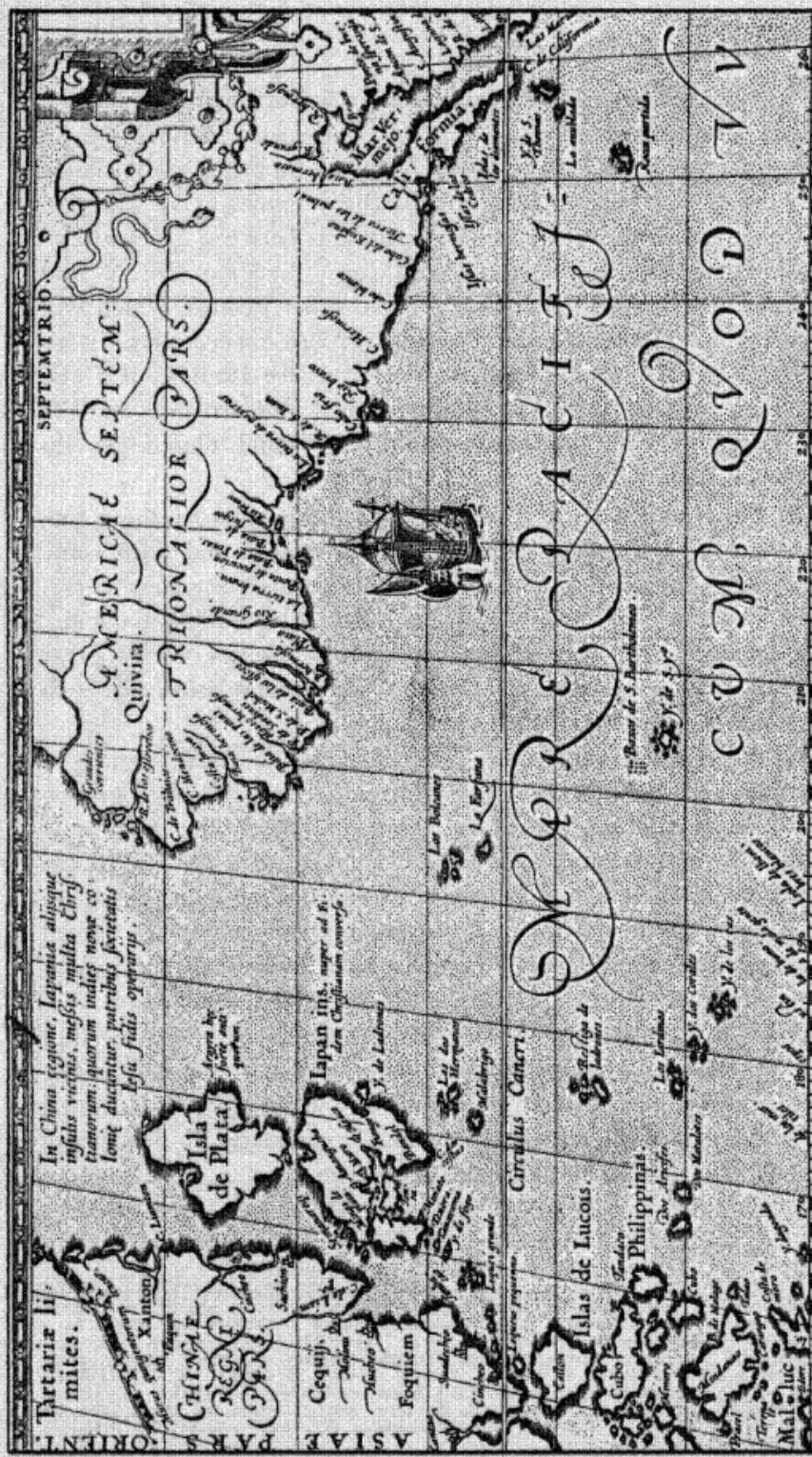


Figure 9. North Pacific in MARI Pacifici (ORTELIUS MAR DEL ZUR) NOVISSIMA DESCRIPTIO by Ortelius, 1589. [From

particular to the island Zamal (the modern Samar) and those near it. The map from which figure 8 was taken shows the Philippine Islands under their individual names, 25° west of Zamal and its archipelago! Zamal itself, although stated in the narrative to be 300 leagues distant from the Ladrone Islands* is included here with them.

While it may seem astounding that two representations of the same area, differing so much as those in figures 6 and 7 on the one hand and in figure 8 on the other, could appear as authentic in the same publication, the following note on the Flemish cartographer Ortelius and his famous atlas, *Theatrum Orbis Terrarum*, from which all were taken, will be enlightening:

. . . the "first modern atlas" (of 53 maps) most of the maps were admittedly reproductions (a list of 87 authors is given by Ortelius himself), and many discrepancies of delineation or nomenclature occur . . . [15].

Parks describes Ortelius as "primarily an engraver, who took his maps where he could find them." [30, p. 119].

Obviously then, in figures 6, 7 and 8 we have been given access to the maps of two cartographers prior to 1570, and the delineations in the first two indicate that their prototype was much earlier. With the material in hand it cannot be traced, although its influence will be observed later.

Of the world map (figure 8), Wagner states: "This conception was not his (Ortelius) but that of Gerard Mercator, who in 1569 had published his large world map" [49, p. 343]. One is almost an exact representation of the other.

Mercator's map is a partial correction of another by Ortelius, published in 1564 [49, pl. XIV] in which "Archipelago de S. Lazaro" is applied to a large group of over fifty islands extending from 3° to 15° N. and over 10° in longitude, and including the individual islands of the Philippines and those in the southwest corner of figure 8. In making the correction by splitting the group apart, not merely was the group name removed 25° from its proper place and attached to other islands, but Zamal was also carried off.

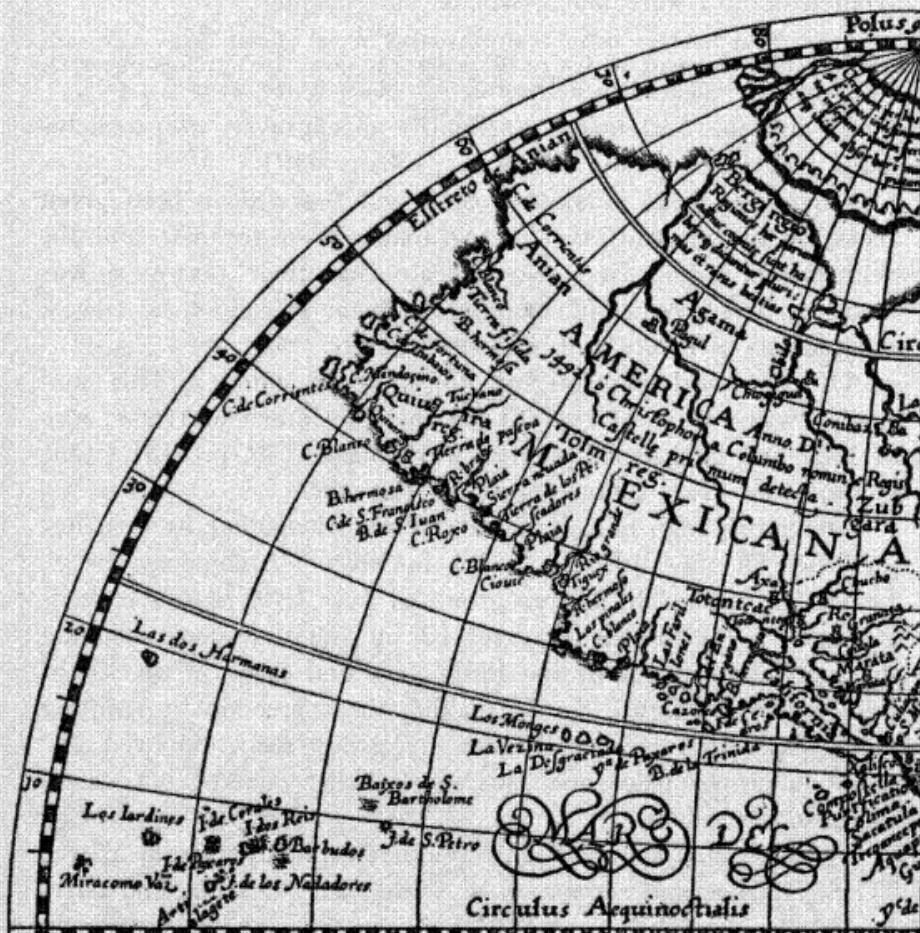
We may now continue with Wagner's quotation from above: "The influence and reputation of these men [Ortelius and Mercator] was sufficient to impose their views on almost everybody

* While the modern name is Mariana Islands, that used in the present paper will be Ladrone Islands merely to agree with the majority of the literary references drawn on.

except the Spaniards for a time. Even the Spaniards finally accepted their ideas, or at least published maps displaying them." In other words, the sixteenth century maps we are following, despite their deficiencies, represent the cartographical authority of the time.

To resume our following of the migrations, the map from which figure 8 is taken was reproduced in 1587* and 1589 (Nos.

* Yzendoorn [52] illustrates from editions of 1612, two of the modified maps said to have been made in 1587. Although the death of Ortelius in 1598 might suggest a posthumous alteration of the plates, the authenticity of the modification is confirmed through its publication in 1589 by Hakluyt. The additions are indicated in figure 8.



[From Dahlgren.]

Figure 10. North-west quadrant of western hemisphere in *ORBIS TERRARUM Typus* by Plancius, 1594.

2 and 4 of Table II), attributed to Ortelius. It had a few additions, among which was the insertion of the Monges group, greatly changed in number and arrangement of the islands and position of the group. The islands are reduced in number from seven to three, almost in straight line E-W at 19° north latitude and a little to the south-east of La Farfana. The names are shortened to Monges, Vezina and Desgraciada due to the fact, probably, that difficulty was experienced squeezing them in. In another map of 1587 (No. 3, Table II) where more space was available, the Monges group was removed 3° more to the north and 5° to the east under the name forms Los Monges, La Vezina and La Desgraciada.

In 1589 also the same cartographer published an elaborate map of the Pacific Ocean (figure 9), and as though in correction of former errors, omitted the Monges group entirely, moved the Hermanas and Bolcanes group back to the west and almost clear of the American meridians, and increased the number of islands to five in each. The San Lazaro and Zamal names are dropped, and Restiga de ladrones placed nearer the true position of the Ladrones Islands. The Philippines appear under their modern name, and include Zamal under the name Tandaco—in error for Tandaya, the name used by several explorers who followed Magellan.

The next influential cartographer was Plancius (figure 10), who in 1594 moved the Ladrones and Hermanas groups several degrees to the south. The latter, at 19° N. was divided, Malabriga (as Maloabrido) being north of the Ladrones and Las dos Hermanas to the eastward of them. The Volcanoes group is omitted, but the Monges group as three islands in straight alignment E-W is in 21° north latitude and 40° east of Cape Mendocino's meridian.

The eastward map-migration of the Monges group continued until 1599, when it reached within 12° of longitude of Cape San Lucas (Table II, No. 7), after which it moved westward, subsequently swinging between 20° and 35° distant from that cape's meridian, with changes in names or spellings and numbers and arrangement of the islands.

The Hermanas and Bolcanes groups were discovered in 1543 by Bernardo de la Torre on his unsuccessful attempt to return

to America by the northern route.* Dahlgren identifies them as probably belonging to the Volcano or Bonin islands—an identification in part previously made by Burney [9a, V, 159; 12, p. 153].

The Monges group, as indicated by the similarity of position in different maps, Dahlgren identifies with the northern islands of the Ladrones, discovered by Gomez de Espinosa, commanding the *Trinidad* in 1522 on the first unsuccessful attempt at the northern route. The theme will be elaborated later, but the mechanics of the initial migratory push may be touched on here.

In relation to the points of departure, Moluccas and Philippines, the three groups were plotted too far to the east. Such would be expected on account of the anticipated over estimate in distance traveled on this route, and the impossibility of checking because the voyages were not completed. The groups therefore appeared on earlier charts as nearer the American than the Asian coast, and when the ocean was split in the middle for the initial cartographical widening, they moved eastward in the tow of America. Subsequent shifts of its coastline set them adrift.

As a matter of fact, they might be said to have been lost as soon as discovered as were many other insignificant or unimportant islands which the early navigators had found and named. Being poorly or incorrectly located, such islands were soon lost through map adjustments, and were rediscovered and renamed later. Thus many of the maps carry them in duplicate positions—correct under the second names and migratory under the original.

The Monges group provides an excellent example of this process as will be discussed later, and for the present others will be cited.

While the first eastward movement of the American coast was associated with the eastward migration of the islands, subsequent shifts in the same direction initiated a westward migration. Several islands belonging to this coast are found on the various maps to be gravitating towards the Monges group and, probably in time, would have been included in it. Three may be mentioned.

Paxaros or Pajara, 7° north of the Monges group on the latest Spanish chart examined, has been traced by Dahlgren to the island later named Guadalupe, having drifted on the maps

* Gaytan was on the vessel, but none of the names he gives to the islands discovered found their way to the maps examined.

24° west and 3° south. Ulloa, originally the rocks now called Alijos, is found 3° north and 3° east of Monges, its journey covering 26° to the west and 4° to the south. In some references it actually is included with the Monges group. Rocca Partida, 7° east and 3° south of the group, belongs to the Revilla Gigedo Archipelago, and has therefore traveled only 20° to the west and a little to the south.

In these map movements, groups have also been merged. The elasticity of the San Lazaro Archipelago has already been discussed in its ability to reach from the Philippines and draw the Ladrones Islands to it, and so forth. At some point of the migrations the Monges and Bolcanes groups of figures 6 and 7 seem to have been combined, one supplying the islands and the other the names. In Plancius' map of 1594 (figure 10) the Monges group, originally of seven islands with only three names, is found as three islands in line and moved to the north, while the Bolcanes group of three islands in line has disappeared.

Dahlgren attributed this merging of the groups to Plancius, apparently not having observed Ortelius' map of 1587 in which the Monges group is represented by three islands near the Bolcanes group. Cartographers are of necessity copyists and the merging must have taken place on an earlier map. Plancius probably copied from it directly, and Ortelius, having dropped and forgotten his first published Monges group because better known as Ladrones Islands, inserted it as another group.

The migrational phase, as may have been observed, belongs mostly to the sixteenth century and the infantile period of Pacific cartography, on emerging from which the Monges group is found accidentally and incorrectly in the eastern Pacific. Without its position being verified, it was so carried to the eighteenth century Spanish charts, as found by Anson, and later regarded as an early Spanish discovery in approximately that situation.

The absurdity of this view is illustrated by the fact that Spanish maps of the sixteenth century show the Monges group neither in the position mentioned, nor under the names applied to it. This is readily understandable from what follows.

Non-Spanish preservation of Monges group. The earliest Spanish chart found by Dahlgren to record the Monges group is that named by him the "Stockholm Chart" (Table II, No. 19)

drawn between 1716 and 1720. It is quite similar to the Anson chart, except in width of the Pacific, in which respect it also differs from Nos. 22 and 28.

The group is not on Sebastian Cabot's map of the world published in 1544, and prepared while he was "chief navigator of Spain," or Dahlgren would certainly have mentioned its presence [12, p. 155]. Two other sixteenth century charts are assumed to transmit Spanish information. One illustrates the voyage of Drake [30, fig. 25] who captured Spanish charts on every possible occasion. The other is the Peter Martyn map published by Hakluyt in 1587 [30, fig. 20] which in Wagner's opinion "was taken from a Spanish map" [49, p. 343]. Parks attributed it to Gualle or Gali, the Spanish navigator instrumental in the first widening of the Pacific. Neither lists islands in the middle area, and those which are noted are only such as are of importance. The maps suggest more the landsman's idea of what is worth recording than the navigator's need for guidance.*

Different from these two is one by the Spanish historiographer Herrera, published in 1601, on which many islands are marked eastward of the Ladrones. The Monges and Bolcanes-farfana groups and Malabriga are absent. Two islands named "dos hermanas" are about 4° almost due *east* of the northern Ladrones. While the map itself does not reach to the American coast another from the same work does, and in addition Herrera lists the islands known. But nowhere does he mention the Monges group, or any islands with which it could be identified (except of course the Ladrones). From the foregoing it is evident that the group was unknown to the Spanish in 1600, and its presence on a Spanish chart of 1716 indicates that it was either discovered between those dates, or copied from another chart.

The second alternative, of course, must hold because the group appeared on a map published in 1570 by Ortelius who, as just shown, was noted for his reproductions of still earlier maps.

As for its authority, Dahlgren states that the map "is prin-

* A good cross-section of the Spanish navigators' knowledge of the region might be found in the comment of Walter, chaplain and chronicler of the Anson expedition [50, p. 240]: "It is indeed most remarkable, that by the concurrent testimony of all Spanish Navigators, there is not one port, not even a tolerable road as yet found out betwixt the Philippine Islands and the Coast of California." It was Walter who made known to the world the contents of the Spanish chart showing the Monges group.

cipally based on Portuguese sources; especially is this the case with the drawing of Japan and the Loo-Choo Archipelago." Further evidence of such origin is carried by the map itself (figure 6) in such forms (each present twice) as *Ilhas* and *Reis* which are definitely Portuguese, instead of the Spanish *Islas* and *Reyes* or *Reyes*.

Since the Monges group was first published on this map based principally on Portuguese sources, and was absent from contemporary Spanish maps, it might seem to have been a Portuguese discovery. However, when its origin is traced, no question need arise of it having been discovered and named by Spaniards, although, had it not been for the Portuguese records, the island names then given, probably, would never have come to light.

When Espinosa returned to the Moluccas after discovering the islands on his unsuccessful attempt at the northern route, the Portuguese commander "seized on the ship and cargo, and on the journals, charts and papers that were in her . . . After an absence of five years, a small number of the crew of the Trinidad reached their native country." [9a, I, 118].

Since the accounts of Espinosa's voyage convey no idea that he identified the Monges group with the Ladrones, the southern islands of which were already known, it may be understood how it could be launched on its cartographical journey by the Portuguese as a separate group.

Similarly, the maps in figures 8 and 10 show Portuguese influence, which is explainable by the fact that subsequent Spanish expeditions, up to and including that of Villalobos in 1542-3, also fell into Portuguese hands.

Changes on transference to Spanish maps. It is not determinable here whether the Monges group passed directly from the Portuguese maps to the Spanish cartographers, or the map of 1570 (figure 6) by the Fleming Ortelius was the stepping stone. Since Ortelius was appointed "geographer royal of Spain" in 1575 [15; 30, p. 47] and his and Mercator's cartographical influence was finally admitted in Spain (p. 60 above), it should have been the latter, although this idea leaves certain points unexplained.

Examining Table II, a marked inconsistency may be ob-

served in the way the Monges group is represented on the various maps and charts. The number of islands varies from 3 to 9, the axis of the group changes from N-S to W-E, the islands change places and even names within the group, while the variation in spelling is very great.

The spelling is not significant in view of the draftmen's errors to be observed. The correct name of the first island is unquestionably Los Monges, although also spelled Mauges, Mangos etc., and the third name should be Desgraciada. The middle name began as Vezina and ended as Mira, each with varietal spellings. These two names seem to be distinct, and not one a misspelled variant of the other.

So far as traceable, authorities for the maps are Flemish, English, Portuguese, French, and Spanish, in such order of appearance in the table. Analysis shows that Mira is found only on the Spanish charts, datable in 1716 and later, and Vezina (or its variants) on the others, all of which precede the Spanish. Furthermore, when the name is Mira, the island is nearly always at the south, while as Vezina it may be at the north, middle, west or east, although it is never very distant from the median position.

The numbers of the islands differ. Practically on all the maps, the names Desgraciada and Vezina (or its alternate Mira) are attached to one island each. "Monges" may indicate one or more up to seven—one on the Flemish, English and French, and more than one on the Portuguese and Spanish. In this connection the first map in the table is regarded as Portuguese, since it was based on such a source.

The axis of the group on the Portuguese and Spanish charts numbered respectively 12 and 19 in Table II, is WNW-ESE, with the small islands on the west and the large one on the east. It is as though the Monges group in figure 6 had been spun a little counter-clockwise, and raises the question if the direction was not due to careless copying. In figure 6, the axis of the group is N-S, as the meridians indicate, nevertheless it does lie diagonally to the page. As already shown, stranger things have happened with these early maps.

The E-W alignment of the Monges group when composed of three islands only has been explained satisfactorily as a merging

with the Bolcanes group of figures 6 and 7. Since we find Mira on the Spanish maps, in place of Vezina on the others, can the same explanation be offered?

The south-west islands of the Hermanas and Bolcanes groups in figures 6 and 7 were named respectively Laim and Laniem or Lanieni. These names Dahlgren and others regarded as misspellings of La Mira. The non-Spanish maps do not repeat them. When the first Spanish chart carrying the Monges group was met, it also showed two groups, the south or west island of which was named Mira or La Mira. This is the Stockholm chart, which Anson's (figure 5) closely resembles. Both groups are eastward of the Ladrones Islands. The first is composed of three islands in line NNE-SSW between 21° and 24° N. under the names deserta, Bolcan and La Mira. The first name is a reminder that La farfana (the orphan) was described as "uninhabited," namely *desierta*, so that we may recognize the group as the Bolcanes of our first acquaintance. The second group is a few degrees to the east and between 20° and 21° N. and on an E-W axis. A large island and five islets on the west are named La Mira and the other La desierta. It no doubt represents what we have called the Hermanas group, which was placed in the same general direction from the Ladrones Islands both by Plancius (figure 10), and Herrera.

Thus, in the cartographical convergence of the Bolcanes and Monges groups carrying the names La farfana, Volcan and La Mira, and Los Monges, La Vezina and La Desgraciada respectively, and their subsequent merging through proximity (especially since neither was recognized subsequent to its discovery), it would not be in the least surprising that La Vezina were dropped and La Mira carried along. The next section will indicate how lightly the islands were regarded in the sixteenth century.

Significance of the names. Some light may be thrown on the question by examining into the meanings of names (apart from those of saints) applied on the early explorations and maps to the many unimportant islands and reefs in the Pacific. Most of them are descriptions, direct or through association: Bolcan or Volcan, Dos Hermanos or Hermanas (Two Brothers or Sisters), Malabriga (Bad Shelter), Vecinos (Neighbors), Nata-dores (Swimmers), Desierta (Uninhabited), Parece Vela (Like-

a-sail), also "Reefs," "Corals," "Gardens," "Openeye," etc. An incident with the sailors stamped an island with the name Matelotes (Sailors). La Deseada (The-longed-for), recorded relief after the exhausting first voyage eastward across the Pacific. Names translated as warnings were applied to three reefs: Mira como vas (Mind where you're going), Quitesueño (Wake up from your sleep), and Catanoduermas (Take care not to slumber) according to Dahlgren. Bird islands were frequently indicated by the names Farallon and Paxaros; or by Los Monges, which now concerns us.

Los Monges (The Monks), Las Monjas (The Nuns) and Frailes (Friars or Monks) were names sometimes applied by the Spanish to groups of rocks or islets inhabited by birds [52, p. 32], an exaggerated resemblance to such enrobed persons no doubt being recognized in the white summits and dark sides. The Farallones off San Francisco bay were first named Frailes [9a, II, 256, map].

La Desgraciada means "unlucky," and possibly was applied on account of some incident recorded by the term.

La Vezina (modern, Vecina) means "neighbor," the feminine form probably being preferred for euphony, as no doubt with the preceding name.

Before analyzing Mira, attention is drawn to the reef named Mira como vas (or vaz) mentioned above as a warning name. It also occurs among the obsolete place-names off the coast of California [49a]. In the Stockholm chart, and in La Perouse' copy of his Spanish chart, Mira Por voz (Look out for yourself) names a shoal to the west of the Ladrones. In both these charts, and in Anson's, two distinct "mira" islands were noted (p. 67 above) in groups with other islands named Volcano and Desierta (Uninhabited). La Perouse searched for both groups and found neither. Tracing the Hermanas group from figure 7 to figure 8, it has been observed that Laim (namely La Mira) was displaced by Malabriga (Bad Shelter).

According to Velasquez' Spanish-English Dictionary, one definition of *mira* as a substantive is "care, vigilance . . . Estar a la mira, to be on the look out, to be on the watch." As an interjection, it means: "Look! behold! take care!" etc. Thus not only as a term but, as shown above, in compound place-names

mira means "warning," and obviously has the same application with the two La Mira islands just mentioned as associated with other islands named "Volcano" and "Uninhabited," namely places of danger or of no importance, and with the Mira in the Monges group.*

These groups remained on the charts, unquestioned and unverified, for two centuries. Apparently to the early navigators the Monges group appeared as "Bird Islands," "Unlucky," and "Warning" or possibly "Neighbor," and, instead of being sought, were avoided as worthless or dangerous to navigation.

A very definite avoidance of them by a Spanish ship near the close of the eighteenth century is recorded on the Spanish chart discussed on pp. 104 ff. As shown there, for a decade or so after Cook's time, at least one Spanish navigator believed in the existence of the Monges group in its position as charted and not as a misplacement of the Hawaiian Islands at which he soon called, and his detour confirms the suggestion just made (see p. 109).

Identification of Monges with Ladrones. The review, above quoted, of Ortelius' atlas published in 1570 serves to explain the great differences between the maps represented by figures 6 and 8. Obviously, they were copies of different cartographers' work, and probably belonged to different periods. Yet, as we have followed the migrations of the Hermanas and Bolcanes groups, with the changes in names, arrangement and position, no question could have arisen regarding their identity, because no other groups were represented in the vicinity.

Similarly with the Monges group—on its first appearance (figure 6) it occupied a certain position which, in figure 8, was filled with islands named Zamal and Restinga di ladrones. In other words, the same islands are represented, and what to one cartographer was the Monges group, to another was Zamal and Restinga di ladrones.

On reaching figure 9, a correction is noted. Zamal, which belonged to the Philippines, has been removed, and Restiga de ladrones allowed to remain and moved almost to the true position of the Ladrones Islands. In brief, we have followed the true

* Dahlgren [12, p. 196] offers the following: "The significance of *Mira* is the sight of a gun or the mark of a butt and, in a transferred sense, an object seen at a distant." Comdr. Dix, an accomplished Spanish linguist, adds: "Mira!=Look! An exclamation on the unexpected sight of an island."

TABLE III
Name comparisons of northern Ladrones Islands

1 U. S. Hydrographic Office, Pilot of 1928 and Charts	2 Espinoza 1522	3 Plancius 1594	4 Wright 1599	5 Herrera 1601	6 Gobien, 1700 (Lopez, 1671)
Uraccas, Faral- lon de Pajaros (38 miles)	N. lat. 20° 32'	Diam. 1 mile	Maloabrigo	La inglesa	Urac, Isle deserte
Maug Ids. (22 miles)	20° 01'	1¼ m.	Mano	Ota or Bota	Maug or Tunas
Assongsong, Assumption or Asuncion (52 miles)	19° 40'	1½ m. (small) (20 leagues)	Cheroshe	Mahao	Assongsong or Assumption
Agrigan (36 miles)	18° 46'	2x6 m.	Grega	Grego	Agrigan
Pagan (27 miles)	18° 07'	3x9 m.	19° or 20° N. Pagan	Pagan	Pagan
Alamagan	17° 36'		Artomagan	Cheriga	Amalagan
Stockholm 1716-20	8 Bueno 1734	9 Anson 1743	10 Seville 1770	11 Anonymous No. 1, 1785	12 La Perouse 1786
farallon	Farellon de Paxaros Isletas	Farallon	Farallon de Paxaros Urac Volcano grande	Farallon de Paxaros Urracas Volcan grande	Farallon de Paxaros Las Urracas
Urac bolcan grande	Bolecan Grande		Grigan	Grigan	Grigan
grigan or Purigan Pigon	Grigan Pagon Alamagan	Pagon	Pagon	Pagan	Pagan
Ilamagan		Alamagan		Alamaganuan	Alamagan

Nos. 2, 3, 7, 8 and 10 from Dahlgren [12], No. 5 from Wagner [49], No. 6 from Burney [9a], No. 9 from Walter [50], No. 11 from Museo Naval, Madrid and Nos. 12 and 13 from La Perouse [23]. Nos. 5-12 are either Spanish maps, or said to be copied from such. In Herrera's list the name Chemechoa (obviously an error) appears between Gregua and Agan, a presence confirmed by no other map.

map migration of the Monges group, erroneously plotted in the first place, to its correct identification as the Ladrones Islands or part of them.

As previously stated, Dahlgren identified the Monges group with the northern Ladrones, discovered in 1522 by Magellan's officer Espinosa on the *Trinidad*, when unsuccessfully attempting to sail eastward to America by the northern route. In 19° or 20° north latitude he discovered an island variously named in the accounts Grega, Gregua, La Griega, Magregua, etc., in which Dahlgren recognizes Agrigan of the Ladrones. The accounts say that the natives were fierce and invaded the ship, but the Spaniards captured and retained one to show in New Spain [9a, I, 116; 12, p. 155].

Continuing the voyage, adverse weather compelled Espinosa to return. Failing to fetch the same island, he brought up at another named Mao, 20 leagues distant from the first. "It was small and dry and inhabited by only 40 persons." Yet he was able to obtain some sugar-cane, and to find a pool which yielded fifteen casks of good water. Here, three sailors deserted.

That these islands were in the northern Ladrones was related by one of the deserters, Gonzalo de Vigo, who made his way to the southern islands of the chain and was found there four years later by the expedition which followed Magellan. He had learned the language and imparted much geographical knowledge of the islands.

Meanwhile, any names Espinosa or his companions may have given to the islands discovered became lost immediately to the Spanish because, as already shown, when the *Trinidad* reached the Moluccas, the Portuguese governor seized all her journals, charts and papers. Hence, were names of such insignificance as Los Monges, Le Vezina and La Desgraciada given by Espinosa's people to islands seen in the northern Ladrones, they might be carried along by the Portuguese, but never by the Spanish who already had the names of the Ladrones Islands furnished by the sailor de Vigo. This would explain the immediate loss of the true identity of the Monges group.

The names supplied by de Vigo are supposed to have found their way to Cabot's map of 1544 which, unfortunately, is not available here. Possibly that by Herrera (Table III, No. 5),

published in 1601, contains them because, in contrast with the other maps, all but one of its northern names seem to be non-Spanish.

Table III, with names of the islands from various maps and accounts arranged in order from the north, serves to identify Grega etc. of Espinosa's voyage with Agrigan. In all the columns, the next island to the south is Pagan, followed by Alamagan—both of course with the customary variation in spelling. While the correct latitude is $18^{\circ} 46'$ N. and given as 19° or 20° in the accounts, the error is not out of reason for the period.* In the first column are given the distances in nautical miles between the various islands, as furnished by the United States Pacific Pilot.

Agrigan is two by six miles in plan and composed of two volcanoes which reach a height of 3,166 feet. It is permanently inhabited.

In the search for Mao, reported as small, sparsely populated and twenty leagues distant from Grega or Agrigan, one would think first of Pagan on the south because the vessel was travelling in that general direction. However, Pagan is larger, three by nine miles in plan and only 36 miles distant—namely, $10\frac{1}{2}$ leagues. Its height is 1683 feet.

On the other hand, to the north is the island called Mahao by Herrera, the Assongsong of modern references, which is very small, one and a half miles in diameter, inhabited only in copra making time, and is 52 miles from Agrigan. While this distance is only $15\frac{1}{2}$ leagues, the interval between the two islands is the largest in the chain, so that the 20 leagues may be regarded as merely an estimate in round numbers. Mao, Mahao and Assongsong certainly must be identical. The island is a volcano, 2923 feet high, which apparently is intensely active every few decades, and covered with vegetation meanwhile [12, p. 156]. On eighteenth century Spanish charts it is named Volcan grande.

U. S. Pacific Pilot notes that Agrigan and Assongsong may be seen in clear weather at a distance of 45 miles. Thus the *Trinidad*, passing between them, could have sighted both from the one position.

Northward of Assongsong 22 miles is a striking group of

* To Urdanetta, de Vigo said that the Ladrones chain extended from 12° to 19° north latitude. This would reduce the latitude assigned to Grega.

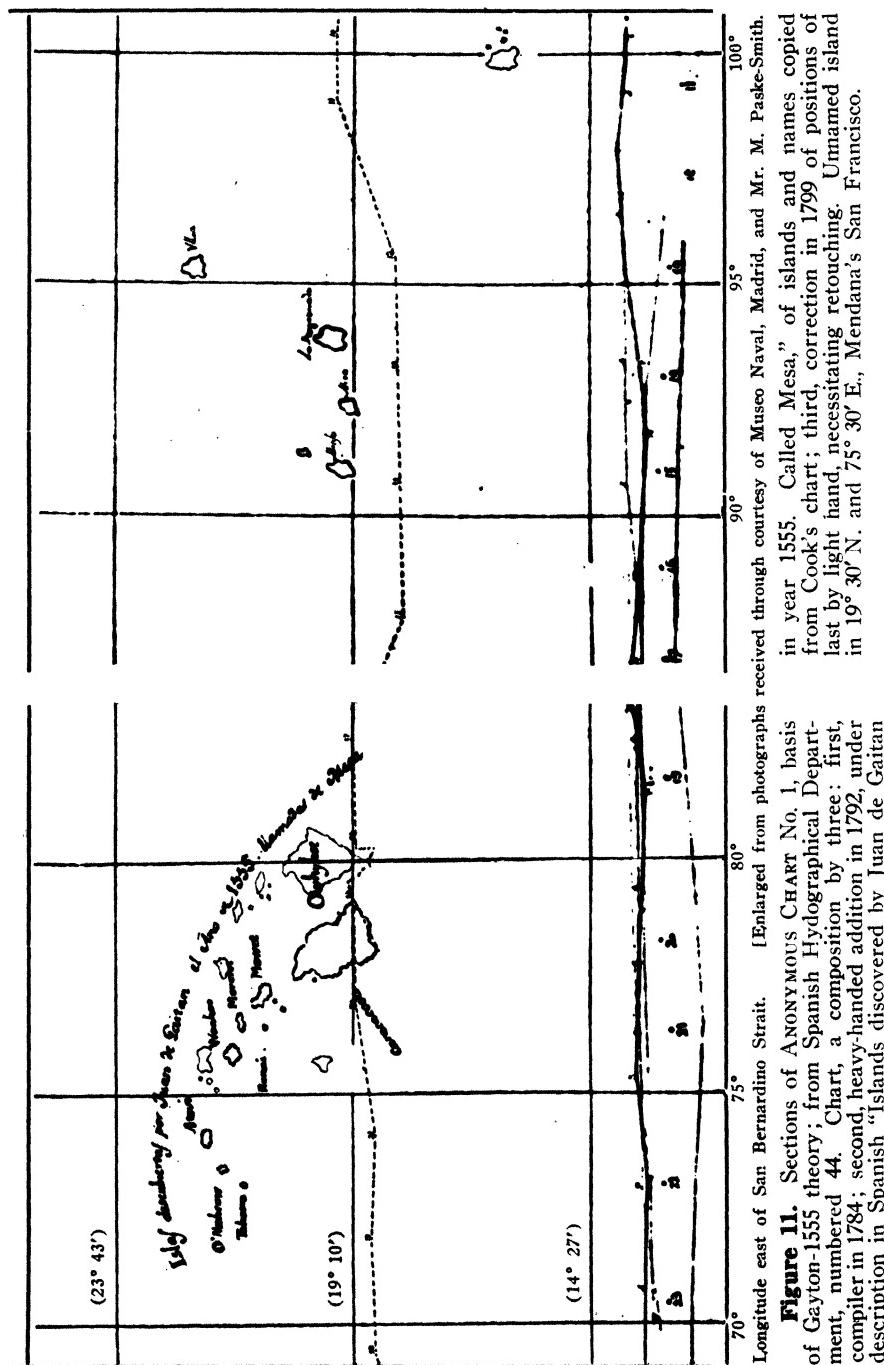
three narrow rocky islets, lying in circular arrangement one and a quarter miles in diameter, and rising abruptly from the sea to heights of 748, 709 and 591 feet. They represent the shattered walls of a crater. Named Maug Islands by the U. S. Hydrographic Office, they have been called Urac and Urracas on the eighteenth century Spanish charts, and Maug or Tunas on Le Gobien's map attributed to Lopez, which has been followed by many non-Spaniards. Herrera uses the name Ota or Bota. Plancius and Wright place Mano at the northern limit of the chain proper, but inscribe the group name more to the north to include Maloabrido and Desierta, misplaced and drawn in line with the Ladrones at wide intervals. We shall return to Maug presently.

Still more to the northward, 38 miles, is a small island, a mile in diameter and an active volcano, 1047 feet high. It has been named variously Farallon de Paxaros, Urac, Uracas and La inglesa. This island and Maug are inhabited only by birds.

Dahlgren suggests the identity of Los Monges with Maug (which he calls Urracas), La Vezina with Assongsong and La Desgraciada with Agrigan. This seems very reasonable considering the meanings of the names, which might be regarded in the class of nick-names. La Desgraciada, as "the unlucky" could have been applied to Agrigan where the Spaniards had trouble with the natives and undoubtedly had to depart without obtaining supplies. La Vezina, as "neighbor" is suitable for Assongsong in relation to the first island. Los Monges, as "The Monks" in sailors' parlance, is peculiarly suitable for Maug, which undoubtedly was seen from Assongsong, if not passed by the vessel.

As previously discussed, the term "monks" was applied by Spanish sailors to clusters of bird rocks or islets on account of the contrasting white crests and black or dark sides suggesting robed monks in conclave, and the elevation and plan of Maug on the chart are such that it could hardly have escaped this attention.

Whimsical names also were suggested to others on seeing Maug, apparently. Urracas, "magpies," again brings up the contrasting black and white. In English there are sea-magpies and in old slang, a bishop was a magpie—both in reference to external contrasts. Tunas, if Spanish, applied as an alternate of



Longitude east of San Bernardino Strait.

[Enlarged from photographs received through courtesy of Museo Naval, Madrid, and Mr. M. Paske-Smith. Figure 11. Sections of ANONYMOUS CHART NO. 1, basis of Gayton's theory; from Spanish Hydrographical Department, numbered 44. Chart, a composition by three: first, compiler in 1784; second, heavy-handed addition in 1792, under description in Spanish "Islands discovered by Juan de Gaitan

in year 1555. Called Mesa," of islands and names copied from Cook's chart; third, correction in 1799 of positions of last by light hand, necessitating retouching. Unnamed island in 19° 30' N. and 75° 30' E., Mendana's San Francisco.

Maug, means "vagrants" or "human rakes," conveying a picture of three old tramps gathering around.

While admitting the suitability of the Spanish *los monges* as a name for Maug islets, Dahlgren refused to allow a connection by means of the name forms. Noting that La Perouse had applied the names Mang and the Mangs to the rocks, and that another writer had suggested the derivation of Mangs from Las Monjas as a variatal form of Los Monges, Dahlgren remarked:

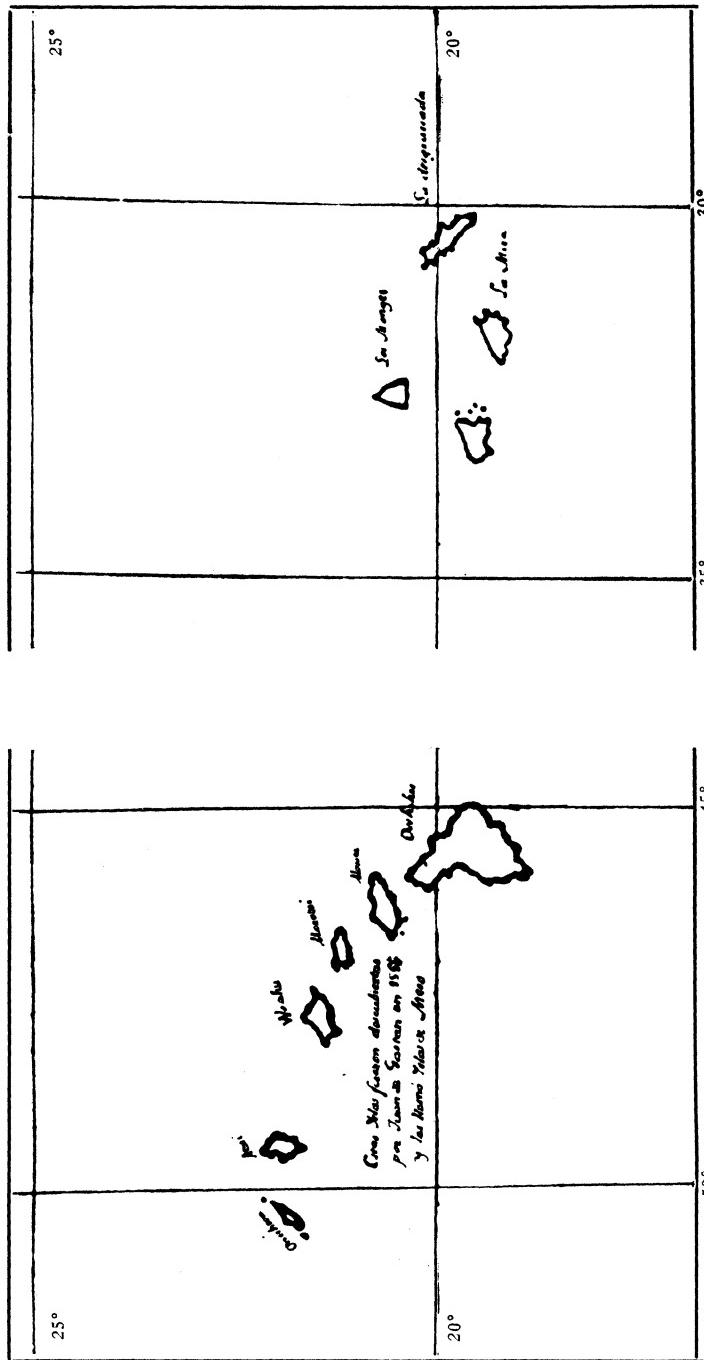
I cannot accept this derivation, however, as a support for the opinion above expressed. Mangs can be traced through the intermediate forms *Maug* (Le Gobien, 1700), *Mahao* (Herrera, 1601), and *Mano* (Plancius, 1594), to Cabot's *Mahaa* or *Maneo* and Espinosa's *Mao*. The Mangs has thus no connection with the Spanish name whether that originally meant "Monks" or "Nuns" [12, p. 156 n.].

Dahlgren may be right, but apparently he did not view the islands as arranged in Table III where, beginning with No. 6 and following (except No. 12), the second island is represented by three dots. To confuse Mano (Nos. 3 and 4), Maug (No. 6) and Mang or The Mangs (No. 13) with Mao (No. 2), and Mahao (No. 5) seems unjustified if the count is carried upward from Grega or Agrigan, the identification of which has been established firmly.

The variations in spelling Monges, viewed in Table II, are so many that Mano, Maug or Mangs might be included with them. The spelling "Mauges" appeared in 1570, and was re-published in 1598 and 1612 under authority attributed to Ortelius [52, pp. 26-30], so that almost at the beginning an error in the name inclined toward the form Maug. One may hesitate to follow Dahlgren in his view, which seems not to have been considered carefully.

In any case, failing the identification of the Monges group with the northern Ladrones by means of the name forms, the suitability of the names is unquestioned, while the identification of the island groups, through the map positions followed, remains irrefutable.

The island La Mesa. The term *mesa*, "table," has served Spaniards and others to designate a table-land. On Anson's chart, said to be a copy of "The Chart of the Spanish Galleon," the southern island of the Monges group is named La Mesa. King had described Mauna Loa, a large mountain on Hawaii



[Enlarged from photograph received through courtesy of Museo Naval, Madrid, and Mr. M. Paskes-Smith.]

Figure 12. Sections of ANONYMOUS CHART No. 2 showing Hawaiian Islands with note in Spanish: "These islands were discovered by Juan de Gaitan in 1555, who called them Los Monges, La Mira and La desgraciada. Chart dated by Beltran y Rózpide as at end of 18th century."

the *southern* island of the Hawaiian group as "flat at the top, making what is called by mariners table-land." To La Perouse, these coincidences strongly supported his theory, and served to identify Anson's La Mesa with the island of Hawaii.

But the identification is questionable on both counts, namely (1) inapplication of the mountain's description to the whole island, and (2) incorrectness of La Mesa as a chart name.

From King's situation when writing, the dome-shaped Mauna Loa does appear somewhat flat on top, but at no time did he imply that the island of Hawaii resembled a table-land. King had passed the eroded ridges of the Kohala Mountains, and then Mauna Kea, the highest mountain, which is conical, before paying attention to Mauna Loa. And of these three distinct mountain masses, together with another, Hualalai, is the island of Hawaii composed. Anchored off the south of East Maui for two days, La Perouse had a perfect view of all four, and from his situation not one could be correctly described as "table-land." His dependence on King's description, instead of his own observations, suggests that this phase of his theory was evolved after leaving the islands.

The extensive search by Dahlgren and others for the authority for La Mesa Island now makes certain that it was not Spanish, but an erroneous transcription from another chart. In Table II are listed (in all their variety) the name forms of the islands of the Monges group found in all the copies of charts available here. From the first dated in 1570 to No. 20, in 1734, no island named La Mesa is found. Its first appearance is in the copy of the Spanish chart of 1743, published in the account of Anson's Voyage, where "La Mesa" is an incorrect spelling of "La Mira."

Carelessness in transcription of names is common in this copy, and identification of the error is given collateral support by two others. The generally accepted forms of the other island names of the group are "Los Monges" and "La Desgraciada." Anson's draftsman inscribed the three names Los Mojas, La Mesa and La Disgraciada, thus flanking the main error with two others.

That the Spanish chart name La Mira should be copied by a non-Spaniard as La Mesa is not surprising. On four Spanish charts of the eighteenth century seen in facsimile, the dot of the letter "i" is either indistinct or absent, and "r" closely resembles

"z" although made in a different manner. In the place names on the various maps, the "s" and "z" are frequently interchanged, so that "mira" might have been read by a non-Spaniard as "misa" or even "mesa." At the same time, to one accustomed to the style, no confusion could exist between "r" and "s" as is evident from the forms of these letters in "Los Monges," "La Desgraciada" and other names present (cf. figures 11 and 12).

No seventeenth century references are available here, but continuity of this style of writing "r" is indicated by its presence in Spanish manuscripts of the sixteenth, namely, from 1542 to 1595 [49, pp. 450-505]. Display type printing of the same century shows the letter as an attenuated "z" or a thin "s" reversed.

Gaytan's Discoveries in 1542. Gaytan was a man of unrecorded rank on the Villalobos expedition of six vessels which left New Spain or Mexico to conquer the Philippines. Leaving port at about 20° N. they steered west and west-south-west and after thirty days, having sailed 900 leagues, they discovered a number of islands in 9° , 10° and 11° N. and named them in Spanish equivalent "Kings Islands." Continuing westward, they discovered other islands or groups and named them in succession, "Corals," "Gardens," "Sailors" and "Reefs", and then came to Mindanao.

Five accounts of Villalobos' voyage have been preserved, two official, two incidental and Gaytan's. They are in general agreement as to the course steered and the islands discovered. Furthermore these islands appear on the many charts which also show the Monges group. In Figure 6, the names are Ilhas dos Reis, Los Corales, Los Iardines, Matelotes and Arizifes.

La Perouse was under the impression that Gaytan's ship had sailed due west—a course leading directly to the Hawaiian Islands. It is not surprising therefore that he formulated his theory. But Gaytan states definitely that the initial course was "west and west-south-west," and that the Kings Islands were in 9° to 11° N.*

The distance sailed from Mexico, as given in the account, also

* Translations from two different editions are available. That from the original in 1550 by Dahlgren [12, p. 29] has it that the initial course was "mostly W. and W.S.W." The account in the 1613 edition, translated by Professor Denzel Carr for Mr. W. F. Wilson, has it: ". . . most of the days West by South & towards the West." Both accounts agree that the first observations of latitude recorded were "13 or 14 degrees" and the second 9° , 10° and 11° , thus leaving no room for doubt from Gaytan's account, independently of the others, that the expedition entirely missed the Hawaiian Islands.

misled La Perouse. If really 900 leagues, it would have brought a ship very close to Hawaii on a westerly course. But, as previously discussed, underestimation of longitude was usual in this period on this course. The total of distances to the Philippines, as given by Gaytan, amounted only to 1420 leagues. Apportionment to that, of the 900 leagues to the Kings Islands, should place them in the Marshalls, according to the latitude, 9° to 11° N., given in the accounts. Finally, three of the accounts mention that the islands were "low," while the other two record nothing on this point. Such a description definitely rules out identification with the Hawaiian Islands.

Concealment of discovery. This absurd claim would be ignored but for its frequent appearance in the literature and its wide currency today by word of mouth in connection with the discovery of these islands. The absurdity is shown by the fact that many maps show both the Kings Islands at about 10° N. and the Monges group about 20° N.*

That the Spanish concealed knowledge of their discoveries in the Pacific, so that freebooters could not use them as shelters, may be perfectly true, but not in 1542. Spain had too many foreigners in her service for such an idea. To take two examples only:

Sebastian Cabot, born in England about 1474 to the famous Italian navigator John Cabot, was called to Spain as "grand pilot of Castile" in 1519 [15]. While "chief navigator of Spain" he was recalled to England in 1546, and under an "impressive royal pension" launched and directed many English enterprises [30, p. 14].

Abraham Ortelius, the noted Flemish cartographer, who published the first world atlas in 1570, was made Spanish royal geographer as already stated. Later [30, p. 47] he was in England in consultation with John Dee, the English geographer, and others, while the publication of his maps continued.

As regards the Pacific, no occasion existed for concealment at the period because it was in fact a closed lake divided by papal bull and international treaty between Spain and Portugal. So great was Spanish feeling of security that, while all vessels in the Atlantic went armed, those of Spain in the Pacific generally

* Gaytan's account, which marks him as somewhat a braggart, was not published by the Spanish government but by Ramusio in Venice, with a collection of voyages in Italian. Who then might be interested in concealment? The name form Gaetano, better known locally than the Spanish Gaytan or Gaitan, is probably Italian.

carried no cannon. This fact was a great contributor to Drake's success.

So what freebooters in the Pacific were to be feared in 1542? Drake was the first to harry Spain in the region, and he did not arrive until 1578, or 36 years after Gaytan. And, obviously, it was due to Drake's marauding that the concealment began. As noted:

Vastly alarmed at Drake's daring and skilful passage of the [Magellan] straits and entrance into the South Seas, where he mulcted Spain of such huge treasure, the Spanish monarch had issued a decree that hereafter any discovery made in the Americas should not be published to the world but kept a State secret [51, p. 105].

The decree being clearly post-Drake or subsequent to 1578, Gaytan's voyage being in 1542, and the Monges group appearing on a map of 1570, we may definitely refute the claims of concealment by the Spanish of their alleged discovery of the Hawaiian Islands in the period mentioned.

Gaytan's discovery in 1555. Although this theory did not come to light outside the Spanish Archives until 1865, its discussion should follow here, because its origin has been traced to a probable misunderstanding of La Perouse' theory.

The Hawaiian Foreign Office had officially asked the Spanish Government for information in its archives which might have a bearing on the discovery of the Hawaiian Islands. In reply, the Spanish Colonial Office explained that all its records prior to 1784 had been lodged in the Archives of Simancas and were not available, but that the matter had been referred to the Hydrographic Department, the report from which was transmitted [40]. Being too long for inclusion here, it is given fully in Appendix I, and its points will be examined now.

The opening paragraph tells its story: "By all the Documents that have been examined, it is demonstrated that the discovery dates from the year 1555, or 223 years before Captain Cook surveyed those islands; and that the Discoverer was Juan Gaetano or Gaytan, who gave names to the principal Islands of that Archipelago."

Then, admitting "that no document has been found in which Gaytan himself certifies to this fact," the letter-writer claims the existence of "data which collectively form a series of proofs sufficient for believing it to be so." Numbering and condensing these data, we have:

1. "The principal one", an anonymous chart alleged to have existed "long before the time of Cook", "in which the Sandwich Islands are laid down under that name."

2. It "also contains a note declaring the name of the Discoverer [Gaytan] and the date of the Discovery [1555], and that he called them 'Isla de Mesa',"

3. And shows other islands situated about 10° due east, named "La Mesa," "La Desgraciado," and "Olloa" or "Los Monges," [assumably the Monges group].

4. The names of four geographers are given in proof of the presence of the Monges group in the early charts,

5. And the opinions of three others are expressed in that of one who "conceives strong suspicions that the true discoverer must have been one of the Spanish Navigators of the 16th century, because of the Iron Articles found by Cook in those islands, one of them being a fragment of a wide sword."

6. The alleged identity of the Monges group with the Hawaiian Islands is not introduced until the opinion of La Perouse, who looked in vain for the former, "and did not doubt that the island of Owhyhee, with its arid mountain in the form of a table, was 'la Mesa' of the Spaniards."

7. An error in longitude observed on the *Descubierta* and *Atrevida* "strongly supported the suspicion that the Sandwich Islands of Captain Cook were Los Monges Ullua &c of Spanish Charts discovered by Gaytan in 1555."

8. La Perouse' theory of the Gaytan-1542 discovery is refuted, since "the Spanish Chronicles denote 1555."

9. Closing with a repetition of the earlier admission: "... there is only wanting the narrative of Gaytan corresponding to the voyage in which he made that discovery; though in my opinion it is not required to make clear the truth of this fact."

Before commenting on the proffered data it may be noticed that, reduced to its essentials, the proof is: "an anonymous chart of implied antiquity," "several suspicions" and "the absence of any account of the discovery."

Yet, without critical examination, the contentions of the curious document were accepted in the Hawaiian Islands as the last word in the matter of their discovery. The letter was published and republished, wholly or in part, and has been and still is

regarded in some quarters both local and foreign as authoritative. Examining it for facts:

The statement in the first paragraph is preposterous, as demonstrated by Yzendoorn [52, p. 23]. The name "Sandwich" was given by Captain Cook to the Hawaiian Islands on their discovery in honor of the Earl of Sandwich, and was a strange one to the Spanish tongue. When the Spaniards began to use it late in the eighteenth century, some spelled it "Sanduic, Sanduich, Sanduvik or Sanduikc," while others thought it the name of a saint and preferred "San Duic, San Duuich or Sn Duy." It is therefore certain that no Spanish chart applied the name Sandwich to these islands before Cook's time.

The third paragraph is mostly incorrect on the basis of other Spanish charts (cf. pp. 75 ff.), which neither carry "La Mesa" as one of the Monges group nor make "Olloa" and "Los Monges" alternate names.

Cook's words regarding the iron sword mentioned in the fifth paragraph, were ". . . edge-tool, which our people guessed to be made of the point of a broad-sword." That the implement was a Japanese fish-knife has been demonstrated beyond all reasonable doubt [43].

The eighth paragraph mentions "Spanish Chronicles" which, after re-reading the letter, prove to be nothing but the anonymous chart.

The appearance of Gaytan's journal of his alleged 1555 voyage, mentioned in the ninth paragraph, has been awaited for nearly three-fourths of a century. The listing of Spanish voyages begun by Urdanetta in 1559 did not bring it to light. Hence its existence, past or present, has long been doubted, and one writer has implied that the claim is fraudulent [52, p. 24]. However, if we follow through a succession of recorded incidents, it might be shown that the claim was probably made in good faith (but with a modicum of national bias which induced some misstatements) and originated through a misunderstanding of La Perouse' theory.

While we may not anticipate the finding of Gaytan's 1555 account, fortunately we are able to examine a photograph of the anonymous manuscript chart which supplied the principal proof of the 1555 discovery, according to the official claim. When Mr. M. Paske-Smith, former British Consul in Honolulu, went

to Madrid, the writer asked him to try and obtain a copy of the chart. In compliance with Mr. Paske-Smith's request, the Spanish Museo Naval courteously gave him photographs, not of one chart, but of two, each asserting the claim of discovery as in the official letter.* Both charts have been greatly reduced in the photographs and much is illegible, but the portions affecting this article are sufficiently clear.

Anonymous Chart No. 1. In neither of the charts may be found all the particulars attributed to the anonymous chart by the official letter. To obtain them, we must refer to both charts, as well as that of La Perouse. Perhaps the man making the search consulted all three charts and handed his notes to the letter-writer who combined them as from one which he said: "appears to be a copy of that called the Chart of the Spanish Galleon, existing long before the time of Cook."

Although it carries a date as late as 1799, Anonymous Chart No. 1 (figure 11) may be identified as that intended in the letter on account of the superficial resemblance it bears to the Spanish Galleon Chart. The name "Ulloa" (Olloa of the letter) is also present, and absent from the second chart.

The analytical examination of Anonymous Chart No. 1 has required too much space to be inserted here and will therefore appear as Appendix II. The points of interest to our subject, however, should be touched on now.

The name "Sandwich" is absent. The individual islands of the Hawaiian group are present, with outlines and arrangement copied from Cook's chart and under the names Cook gave them but with the group inscription, in Spanish: "Islands discovered by Juan de Gaitan in the year 1555. Called Mesa." The Monges group is represented by four islands—Monje, Mira and la Desgraciada, and the other unnamed. "La Mesa" of the letter is absent, "Los Monges" is incorrectly spelled "Monje" and "Olloa," namely Ulloa, is an island outside the group.

The chart is a composite by three or more draftsmen working in different periods. It was originally drawn up in 1784 or later for a purpose not connected with Hawaiian discovery. The Monges group was represented, but *not* the Hawaiian Islands.

* Mr. Geo. W. Luter, of Honolulu, who was in Madrid and conferred with Mr. Paske-Smith both before and after he received the photographs, states that modern Spanish officials lay no claim to the discovery of the Hawaiian Islands by Spaniards.

In 1792 or later, the second draftsman inserted the Hawaiian Islands as described above, and was solely interested in the Gaytan-1555 theory.

In 1799, or later, the third draftsman, whose work evidenced no interest in the Hawaiian question, made some corrections of island positions and delineated the tracks of vessels which did much to give the chart the appearance of that of the Spanish Galleon.

Anonymous Chart No. 2. This is the work of yet another draftsman. The photograph received represents a map with a latitude range approximately from 17° N. to 38° N., but does not cover the full width. The longitude of the portion showing ranges from 17° W. to 53° W. of a meridian datum of either Cape San Lucas or San Blas.

The Hawaiian Islands (figure 12) are present with their arrangement and individual names as on Cook's chart, but carelessly copied. His group name is omitted and replaced by the note: "These islands were discovered by Juan de Gaitan in 1555 who called them Mesa Islands."* The Monges group, about 15° to the east and in 19° to 21° north latitude, is represented by four islands and four rocks, to which the names Los Monges, La Mira and La desgraciada are attached. Y. de Pajaros is north of the Monges group in 27° N. and an island, apparently named Ya de no (no doubt Anublada), is at 18° W. and 17° N. No ships' tracks nor other islands are contained, though to accord with maps of the late Monges period, other islands should have been present such as Donna Maria Lajara, Ulloa and, possibly, Rocca Partida.

No date is indicated but, being subsequent to the publication of Cook's chart, it must be 1784 or later. From the inscription it may be identified with that mentioned by Beltran, in his article "Las Islas Hawaii" [5] published in 1881, which he dates as at the end of the eighteenth century.

The impression formed is that the map was prepared for some such discussion as the present.

As the Spanish official letter launching the widely accepted Gaytan-1555 theory based it on the delineation of the Hawaiian Islands on an anonymous chart supposed to have existed long

* Estas Yslas fueron descubiertas por Juan de Gaitan en 1555 y las llamó Yslas de Mesa.

before Cook, and the chart has been shown not only to be post-Cook, but to have depended on Cook's information, the theory may be regarded as unfounded.

Origin of Gaytan-1555 theory. The official letter having intimated that further search in Spain would be profitless, greater success in tracing the origin of the theory may be anticipated from Spanish sources on the west coast of America, whence the trans-Pacific voyagers departed. That some interest in the subject was displayed there between 1791 and 1792 is evident from a comparison of two maps [49a, pls. XXXVII and XXXIX], prepared in those years by Bodega y Quadra, naval commandant with headquarters at San Blas, and himself a navigator and cartographer of some note.

Both maps are of the west coast of North America, and include the Hawaiian Islands in the oceanic portion. However, the 1791 map omits the Monges group of the earlier Spanish charts, while that of 1792 includes it (Table II, No. 27). In addition, the earliest datable reference to the Gaytan-1555 theory found so far is in the log of the *Descubierta-Atrevida* expedition [40], which left the American coast in December, 1791. This combination of place and date leads us to an article by Kuykendall [22] in which he notes plans of Estevan Jose Martinez in 1789 for Spanish occupation of the Hawaiian Islands.

The papers of Martinez, a naval officer, also contain the earliest Spanish reference to the discovery of the Hawaiian Islands by Spaniards so far revealed in the present search. In notes by his contemporaries, the discoverer's name is said to be Gaytan and the date 1555. But when followed to its conclusion, the whole is found to be a misapplication of La Perouse' theory, already discussed, which set the date as 1542.

Reporting to the viceroy in Mexico from Nootka Sound, which Martinez was occupying and fortifying for Spain, he wrote several letters on July 13, 1789 [27]. In No. 13 he mentioned that Douglas had with him on the *Iphigenia*: "Tayanna [Kaiana] king of the island of Owyhee, one of those of la Messa which were discovered by the Spaniards, the English giving to the same the name Sandwich."* In No. 20 he reports taking from the

*. Tayana Rey de la Ysla de Owyhee una de las de la Messa, las quales fueron descubiertas por los españoles, dandole a las misma los Ingleses el Apelativo de Sandwich.

British captain Colnett whom he had imprisoned: "A native of the Islands of la Mesa or Sanduich . . ." and in No. 23, refers to "the Islands of la Messa or Sanduich (which is the same) . . ." A similar reference is in his journal of September 30, 1789 [28].

Unlike his contemporaries, Martinez is unspecific with regard to the authority for his reference, the name of the discoverer or the date of the discovery. In addition (if the transcript of his letters be correct) he twice spells the alleged Spanish name for the group "la Messa" and once "la Mesa." Possibly Martinez was uncertain of his facts.

Under the command of Tobar, Martinez' first pilot, Colnett and his captured vessel were sent to San Blas, where Tobar reported on the proceedings under date of September 18, 1789 [46]. In doing so, he referred to "the islands which in his time James Cook had called (without any right) Sn Duy [Sandwich]; when their first discoverer was our Spaniard Juan Gaytan, who about the year 1600 or later had named them all the Islands of la Mesa."*

It should be noted that Tobar is the first to mention Gaytan, and places the year as about 1600, not 1555 as later adopted.

The newly arrived viceroy reported to the Colonial Office in Spain, under date of December 27, 1789 [38] on the proposed occupation of "the Islands of la Mesa or Sanduich," but withheld his recommendation. He stated, however: "This plan is not without merit because if the Sandwich Islands are the same as those discovered by our early Spanish navigators and named la Mesa, according to the statement of Mr. de Bougenville in his work, they could serve as a port of arrival and revictualing for the ships that come from the Philippines to this Kingdom [namely, Mexico] but . . . " ** In his later report, September 1, 1791, the viceroy mentioned "the Islands of la Mesa or Sanduvik . . . "

The quotations are from Spanish official correspondence, and it seems strange that Spanish naval officers reporting to the viceroy, and the viceroy to the head office in Madrid, should have to identify, by the name Sandwich given by Cook, the islands

* *las Islas de que por Jacobo Cook se llaman en el dia (sin razon alguna) de Sn Duy; quando su primer describidor fue nro Espanol Juan Gaytan, qe tubo á bien el año de mil seis cientos y tantos el nombracle á todas ellas las Islas de la Mesa.*

** *No es despreciable este Proyecto por que si las Islas de Sanduich son las mismas que descubrieron nros antiguos navegantes Espanoles y denominaron de la Mesa, de que hablare en su obra Mr. de Bougenville pudieran servir de puerto de arrivada y refresco de víveres a las embarcaciones que vienen de filipinas a este Reyno pero . . .*

they claimed their early navigators had discovered and named la Mesa. Equally strange is the fact that one of the officers repeated the identity in his own journal.

Evidently, the Spanish officials had made a discovery, not that of the Mesa or Sandwich Islands, but of the fact that some one said the Spanish had discovered them. And since other Spaniards (especially the higher officials) had been unaware of this Spanish discovery, they must be made acquainted with it when the islands are mentioned!

However, the viceroy erred in his authority of reference. De Bougainville was the French explorer in the southern Pacific in 1768 [7], who did discuss briefly the early Spanish voyages and referred to the Gaytan voyage of 1542. But at no time did he mention any island or group that could be identified with the Hawaiian Islands. It becomes very evident from the quotation to follow that the viceroy, being familiar with the name of De Bougainville—then the most famous French explorer—had not been made acquainted with La Perouse' visit to his province which occurred a few years before his arrival, and to which he should have referred.

Malaspina, commanding the *Descubierta-Atrevida* expedition, observed [25]: ". . . the unfortunate Count de La Perouse, sailing the same parallel [as the Hawaiian Islands] has recently become convinced that that archipelago was the same which Juan de Gaitan, Spanish navigator, discovered in 1555, and named the different islands, Monge Islands, Ulua, etc."* Malaspina's information did not come direct from La Perouse or his writings after the Gaytan theory was formulated, because there was no such opportunity. In any case, La Perouse had placed Gaytan's discovery as in 1542. It is obvious that Malaspina was repeating some error picked up on the Pacific coast of North America which he had just been exploring in 1791.

Correlating the references, exclusive of the anonymous maps, we have four authorities (all from the Pacific coast) who assert that Gaytan or some Spanish navigator discovered these islands. Tobar gives the date as about 1600, Malaspina as 1555, and Martinez and the viceroy ignore it. Of the same four, all apply

* . . . las Islas de Sandwich, y cuando el desgraciado Conde de la Pérouse corriendo un mismo paralelo, habiese convencido de nuevo que aquel Archipiélago era el que en 1555 descubrió Juan de Gaitán, navegante español, y denominó en sus diferentes Islas de Monge, Ulúa etc.

the name la Mesa to the Hawaiian group except Malaspina, who writes "Monge Islands, Ulua, etc." but does not mention a group name. The authorities are three naval officers and the viceroy, who should be well informed, and the divergences imply that they are repeating information which had not become stabilized, or was mere rumor.

The matter is cleared up when it is found that a French navigator said so, and both by elimination and direct statement he is recognized not as De Bougainville, but La Perouse, whose theory was different.

As pointed out, La Perouse had assigned the year 1542 to Gaytan's discovery, not 1555 or 1600. He also misread the name "La Mesa" for "La Mira" on the Spanish maps, following a mistake of Anson's, and applied the name only to the island of Hawaii. He did not apply the name La Mesa (nor any other) to the Hawaiian Islands as a group name under Spanish authority—that was done by Martinez, Tobar and the viceroy. His theory was formulated at the Hawaiian Islands in February, 1786.

Seven months later, namely in September, La Perouse enjoyed an agreeable ten days at Monterey, California, as the guest of the Spanish government, the officials of which showered attentions on him. In fact, he records his embarrassment through the rivalry in courtesies from Pedro Fages, the governor, and Martinez, who had arrived from San Blas in command of the two annual supply ships. Present also was Tobar, second in command, who was the first to greet La Perouse outside the harbor and brought his ships into port. At Monterey, La Perouse was given a Spanish chart of the Pacific [3, p. 430; 23, pp. 192-223, 233].

Probably attempting to respond to the many courtesies received, La Perouse warned the Spaniards of the Russian encroachments from the north. Cognizance was taken of the warning.

That La Perouse also expounded his theory is obvious, and undoubtedly the manuscript chart was brought out as a result of the discussion. But how well was the theory understood?

It might seem that at the time the attention given La Perouse was only one of politeness. Fages' account of the visit does not mention the theory [16]. And obviously no notes were made or the later errors in the Spanish officials' writings would not have

been so great.*

Evidently when Martinez found use for the theory three years later, he endeavored to recall it. The "La Mesa" of La Perouse, not being on any Spanish map, Martinez and the others misunderstood it as applying to the Hawaiian Islands as a group. Tobar, having heard probably that the discovery was in the sixteenth century, recollects the date as about the year 1600. Mention of the year 1555 must have reached Malaspina through others of La Perouse' associates at Monterey. That the figure 1555 was a confused recollection of the date 1550, when Gaytan's account was first published, is highly probable in view of the other errors.

Martinez' endeavor to recall La 'Perouse' theory, after three years of neglect, may have been due to an attempted justification of his proposed occupation and conquest of the Hawaiian Islands on the basis of one of Spain's colonial principles, namely, that discovery constituted not merely right to possession, but absolute sovereignty.

This principle was a live one with Martinez. Spain claimed the Pacific Ocean and the lands washed by it, because her officers had seen it in 1513. The implied possessions, of course, included the western coasts of the Americas, which foreigners were forbidden to approach without Spain's permission.

Following La Perouse' warnings of Russian encroachments, Martinez was despatched to Alaska in 1788 to make observations. He learned that Russia claimed much of the American coast on account of her discoveries in 1741, and planned the following year to occupy Nootka Sound, the new center of the fur-trade, in order to forestall the British traders who were making similar preparations [26, pp. 300-1].

Returning to headquarters, Martinez recommended immediate occupation of Nootka, so as to forestall the Russians, and offered to lead the expedition. Arriving early in 1789, Martinez found no Russians at Nootka, but did meet with the British and captured

* While many journals of Martinez' expeditions are listed [10, pp. 38, 142, 151-2] none are recorded for the year 1786. Apparently the trip to Monterey was merely a routine voyage carrying supplies and no journal was required—consequently Martinez' understanding in 1786 of La Perouse' theory was not recorded.

them and their vessels.* The British captains claimed the right to occupy Nootka because it had been discovered by Captain Cook in 1778. Martinez won the argument by demonstrating that a Spanish ship, of which he was second pilot, had preceded Cook to that place by four years.

It was at this time that Martinez outlined to the viceroy (of whom he claimed to be nephew) his plans for occupying the Hawaiian Islands in connection with a great scheme of trade monopoly.

Furs and lumber from the American north-west coast were in demand in China, and the Hawaiian Islands formed a necessary and desirable mid-oceanic station which could supply the trans-Pacific sailing vessels with abundance of fresh food. In addition, Martinez pointed out, 400,000 new subjects might there be obtained for his Catholic majesty. Furthermore he was told by Captain Colnett's Hawaiian servant, who posed as a chief, that the Hawaiians would much prefer the Spaniards over the English.**

Martinez therefore recommended that Spain occupy the Hawaiian Islands on account of their value, and also to deprive foreign traders then using them of the convenient approach to the American coast; the expense of occupation to be borne by a company of merchants of Mexico city, in return for a monopoly for fifty years of the fur and lumber trade between the American north-west coast and China.†

The viceroy, then about to be replaced, endeavored but failed to obtain his successor's approval of the plan.

The discovery of the Hawaiian Islands by Cook had been published in 1781 and later years without creating any apparent interest among the Spanish. A similar lack of interest followed

* Martinez' high-handed actions at this time caused the noted Nootka Sound Controversy which almost led to war between England and Spain and a general European conflagration and cost Spain \$210,000 in indemnities. The effects are said to have been wider. It tested the triple alliance of 1788 between England, Prussia and the Netherlands; afforded the occasion for overthrowing the Bourbon family compact of 1781; checked a revival of Spain's greatness and initiated the collapse of her colonial empire; influenced the French revolution; had a bearing on "the existence, or at least the expansion, of the United States;" and brought about the "decisive conflict between two great colonial principles," namely of Spain and England [26, pp. 284-5]. Thus the attention accorded little Hawaii by the initiator of so much trouble shows that even as early as 1789 she had her place in the sun!

** This, apparently, was *hoomalimali* because the Spanish found the Hawaiian too restless under their control and released him to the English.

† Possibly Martinez' ideas were borrowed from Meares, who had similar plans for the monopoly except that he expected that the Hawaiian Islands would become British consequent on their discovery by Cook. Martinez' captures were of men and ships belonging to Meares' trading company. Since all were on friendly terms until Martinez sprung his coup, it is probable that the British captains were over-confident in discussing their plans.

La Perouse' information in 1786 that the Spaniards had discovered the islands before Cook. However, in 1789 Martinez (with associates apparently) evolved a great trading scheme which required Spanish control of the islands, and simultaneously announced that the Spanish had discovered them—such announcement being the earliest from Spanish sources found so far. The coincidence indicates clearly enough that it was the need for the islands in the trading scheme that caused Martinez to assert the claim of discovery in justification of the proposed seizure.

To conclude this section: The Gaytan-1555 statement obviously is untrue and arose through a misunderstanding of La Perouse' Gaytan-1542 theory, which has been rejected by all, including the Spanish Hydrographic Department through which the Gaytan-1555 belief became publicized and reached books of history.

Of the many theories which arose subsequent to La Perouse' time, practically all were formulated under the influence of the "must" theory in the interpretation of local incidents and native accounts of early foreigners arriving. No consideration was given to the fact that British, Dutch, French and Portuguese ships were crossing the northern Pacific in the sixteenth century and later, and that while the Spanish routes avoided the Hawaiian Islands, those of certain Dutch and British vessels struck diagonally across the Pacific with a better chance of sighting them.

In considering the local incidents, the theorists have interpreted incorrectly the meaning of the term "discoverer," the proper sense of which, in the connection, is "to make known to the world." The term "discoverer" cannot be applied appropriately to early arrivals at these islands who settled down and remained here. Otherwise, successive canoe loads of people who became the Hawaiians were the discoverers, also some Japanese castaways [45] and potential shipwrecked Europeans who might prove to be British, Dutch, French, Portuguese as well as Spanish.

Iron anchors and blonde natives. Townsend [47, p. 66] in these islands in 1798, and speculating on the possible knowledge of them by the Spanish, notes:

There is at Mowee the ring and part of the shank of an anchor of about seven hundred weight which was not long ago hooked up there, where there is no recollection of there ever having been a vessel, and from its appearance it must have been there a great many years.

This apparently was hearsay because the note was made before Townsend reached Maui where he did not go ashore. In 1824, also, Kotzebue heard of anchors having been found both on Oahu and Maui [21, II, 168].

In view of the complaints, by the earlier post-Cook navigators, that anchors were stolen by natives and lost through coral cutting the cables, the question of antiquity of the anchors reported might have been settled by an examination of them. Such was not done by those writing. Before Kamehameha got control of all the islands and instituted orderliness between the natives and ships when trading, anchors were stolen, taken ashore and traded back to the owner or to the captain of some other ship. Little doubt can exist that the anchors mentioned by Townsend and Kotzebue belonged to this class.

References to light-colored natives, alleged to be descendants of early foreign arrivals, have frequently been met. Townsend quotes John Young as relating that white men had arrived and settled in the pre-Cook period, the proof of which was that "he had seen their descendants which satisfied him of the truth of the story, and that they were white."

Among the Polynesians is a strain termed *kehu*, '*ehu* etc. according to the dialect, with lighter skin, hair and eyes than the average. It is generally dominant in families where it is found. It is still definitely Polynesian, however, and cannot be confused with what are regarded as white people, although frequently it is. Albinism also is present. In addition, in these islands, references are made to "light-eyed" people, and to others termed *keokeo* or *keakea*, "white," which may have been what Young referred to, and such does suggest the presence of a European strain. If so, the question of origin from Spain or from another European country cannot be settled by the evidence available.

Visit by a Spanish ship. Shaler, here in 1804, records the following:

The discovery of this fine groupe is attributed to captain Cook, though the nations [sic] say, that, several years before his appearance there, a ship appeared off the south end of Owhyhee: two girls went on board of her in a small canoe, which was stove alongside the ship, and, after remaining a night on board, they returned in a small boat, furnished them by the commander of the ship. This fact is so well averred that it cannot be doubted; and there is the greatest reason to suppose the ship was Spanish, particularly so as there is a groupe of islands placed on their charts of the Pacific Ocean, a few degrees to

the eastward of the Sandwich islands, said to have been seen by their Manilla ships [39a].

No other account of this event has come to light, and caution in accepting it is necessary because Shaler confused native historical incidents then only twenty years old. The facts were as related, probably, but the period belongs to that in which the native women freely boarded the foreign ships.

Cook's vessels, at first, were regarded as temples, which were tabu to women. The novelty of Cook's vessels was such that the native accounts rang with its sixty years later. How could Shaler's foreign vessel, if it preceded Cook, have come and gone with no record except Shaler's chance note?

However, the indications are fairly certain that Shaler was correct in his identification, although not the period. A Spanish ship, the *Magallanes* apparently, did round the south point of Hawaii on the night of April 18 of an unidentified year—probably fifteen years after Cook and ten years before Shaler's visit (cf. p. 109). Her track shows her off Kealakekua bay on April 19, whence she left at once for Manila.

Ellis [14] in 1823 gathered many accounts of early foreign arrivals, or possible castaways, on the island of Hawaii. Among these he included Paaō, the priest, who was regarded by the natives of that island as the founder of their priesthood and introducer of human sacrifice. Ellis theorized that Paaō was a Catholic priest (and of course Spanish), but no evidence has been brought forward other than to prove that he was a Polynesian. Ellis' idea was elaborated by Yzendoorn, as stated below.

In another account that Ellis records, the son of Paaō meets and addresses a group of newly arrived white foreigners in their own language. They had landed in south-west Hawaii in the reign of Kahoukapu and later left the island. Their leader was Manahini, a term in the dialects of the Society, Marquesas and Hawaiian Islands as Ellis points out, "employed to designate a stranger, visitor or guest."

The usual form of the Hawaiian term is *malihini*, which does not necessarily indicate "foreigner." It is the antonym of *kamaaina*, "child of the land," which in its strictest sense indicates one born in the land immediately present or referred to. Obviously, the term "stranger" as the name of the leader was a transfer from a description of the party, and that the strangers were not

Europeans seems assured by the native date.

Kahoukapu was born in 1404 calculated on a generational unit of 25 years, or in 1469 on a 20 year unit, so that his reign occurred before Europeans became active in Pacific voyages. The tradition, if anything, is a record of a visit by non-Europeans. The identification of the party as "white" may be discounted, because Ellis so identified the newly arrived Polynesian priest Paaō, whose son is said to have spoken the language of the strangers.

These and other traditional arrivals mentioned by Ellis he thought might have been "survivors of the crew of some Spanish ship wrecked in the neighborhood" or "culprits committed by their countrymen to the mercy of the waves." And the theory of the Spanish discovery he sums up discerningly in the following words:

It is possible that one or other of the islands might have been seen by some Spanish ship passing between Acapulco and Manilla; but it is not probable that they were ever visited by any of these ships. An event so interesting to the people would not have been left out of their traditions, which contained many things much less important; and, had the Spaniards discovered them, however jealous they might be of such a discovery becoming known to other nations, that jealousy would not have prevented their availing themselves of the facilities which the islands afforded for refitting or recruiting their vessels, which must frequently have been most desirable during the period their ships were accustomed to traverse these seas. [14, p. 450].

Spaniards shipwrecked in 1527 or 1532. A widely quoted legend, first published in 1838 [13, p. 4], tells of the shipwreck and landing of two foreigners, a man and a woman, at Kēeī, west Hawaii, in the reign of Keliokaloa. That its correctness as to place and time was specifically denied in 1867 by a Hawaiian traditionist [20], no more unreliable than his predecessor, has received but little attention. The second account placed the event as on the north-east coast of Maui, and four generations earlier.

While the Keliokaloa legend was accepted, in a general way, as referring to Spanish castaways, not until 1880 was it connected with historical Spanish incidents. In that year two independent accounts were published adding, to many of the points of Spanish discovery discussed above, identification of the wrecked vessel or surviving commander as Spanish.

One account was by Fornander [17, pp. 108-9] who, quoting as from Burney's "Discoveries in the South Seas," referred to the Saavedra expedition of three vessels leaving Mexico (then New Spain) in 1527 for the Moluccas, and losing sight of the two

smaller vessels in a storm after voyaging 1000 leagues. Fornander combined an estimate that the expedition was then 200 miles "westward and southward of the Hawaiian group," with an assumption that the storm was a Kona "a southerly or southwesterly gale" and thereby adduced the probability that the wreck was of one of the missing vessels.

The second account, by Peirce [31, pp. 6-7], quoted as authority: "'Honest Bernal Diaz' in his 'True History of the Conquest of Mexico,' written in 1568," whose account of Saavedra as given in very sketchy and places the date as 1527 or 1528. Diaz is also quoted as saying:

. . . in the month of May, 1532, Cortez sent two ships from the port of Acapulco to make discoveries in the South Seas. They were commanded by Captain Diego Hurtado de Mendoza, who had the misfortune of a mutiny among the troops. In consequence thereof, one ship, of which the mutineers took possession, returned to New Spain, to the great disappointment of Cortez. As for Hurtado, neither he nor his vessel was ever heard of again.

Then referring to Hawaiian traditions of which Peirce "acquired reliable knowledge during his twenty-two years of residence at these islands, which began first in 1825" and ended about 1878, he mentions two wrecks in the time of Keliiokaloa, the one localized as at Keee, "and the other, on the east side at Kau, district of Puna." Peirce surmises that these wrecks were of some of the missing vessels from the Saavedra and Mendoza expeditions.

In yet another tradition which Peirce assigns to the reign of Keliiokaloa, a boat from abroad arrived with an individual who became known as "Olono" (namely Lono). The account is merely a misapplication of that by Kotzebue [21, II, 163] in which the latter confused the god Lono with Lono the king and nephew of Keliiokaloa. However, Peirce conjectures "that this important person may have been Captain Diego Hurtado de Mendoza."

In order to connect the Hawaiian traditional and Spanish incidents, Fornander and Peirce endeavored to establish the dates of the former. Using a generational unit of 30 years, and counting through the genealogies, Fornander arrived at some year between 1525 and 1528, which accords with the Saavedra expedition of 1527. Peirce preferred a unit of 20 years, and miscounting the number of generations, calculated the year of shipwreck

as 1532, which agreed with that of Mendoza whom he favored. A third writer, Jarves [19, p. 103], set the date as 1620 regarding the genealogies as lists of reigns of ten to fifteen years duration.

However, whether the year be 1525-8, 1532 or 1620, this juggling of figures is futile in connecting the Hawaiian tradition with the voyages mentioned. As gathered from other and more authentic information [12, pp. 24-7], when it met the storm the Saavedra expedition was 400 miles south of the latitude of Hawaii and, according to its log-book, 1226 leagues from Mexico and 373 leagues from Guam. Another account made the first distance 1150 leagues. In either case it was three-fourths of the way from Mexico to Guam.

Thus, as Dahlgren points out, in order to be in position to be blown to Hawaii by Forander's southerly storm, the lost vessels would need to perform what was at the time a physical impossibility, namely, sailing back against wind and current for about 1600 miles.

The Mendoza incident had nothing to do with Polynesia. "South Sea" was the first name of the Pacific Ocean, and Mendoza's expedition was for the exploration of the American coast. He abandoned his vessel in the Gulf of California, and was killed at or near Sinaloa when attempting to return overland [12, p. 27].

Fornander's prestige, his acceptance of the views put forth by the Spanish Hydrographic Department, and his ingenious presentation of other material, secured the support of historians for several decades in his theory of Spanish discovery, and thus led to its general acceptance today. Not until 1913 was it challenged locally, and then only on certain points.

Yzendoorn's views. In a paper [52] published by the Society in 1913 Yzendoorn destructively criticized the claims made by the Spanish Hydrographic Department and demonstrated the absurdity of the Gaytan-1555 and La Mesa ideas. His incisive analysis has not received the consideration it deserved. However then and later [53], in 1927, he insisted that the discovery must have been made by other Spaniards. Three points of his theory should be examined.

Bolcanes and Monges groups. Yzendoorn had studied 65

published maps covering a range of 254 years (1541-1785) including those in figures 5-10 above and most of those in tables I and II. Except for Anson's copy, he did not see the Spanish charts. His tables showed the great range in longitude and the lesser range in latitude already mentioned. However, by selection he was able to demonstrate coincidences of position of the Bolcanes and Monges groups with portions of the Hawaiian Islands, and of outlines and arrangement of some of the islands. He also recognized in the name Los Monges, references to bird islands. His concluding words were:

Now as the Los Monges of which we are treating, are constantly put at the western flank of the group, and considering the reasons which prompted the Spaniards thus to christen certain islands, may we not identify them with Laysan and the neighboring rocks? I am the more tempted to do so as these islands have a close resemblance with the White Friars in the neighborhood of Acapulco with which the Spaniards were familiar. Kauai would then become La Desgraciada, and its western neighbor, Niihau, La Vezina.

If so, the Bolcanes would represent a separate discovery of the windward islands, the volcanoes of Hawaii having been evidently active when the island was first sighted. [52, p. 32].

It is unnecessary to discuss the weakness of these conclusions since the Monges and Bolcanes groups have been recognized as map misplacements of part of the Ladrones Islands and other islands to the north, where intense volcanic activity and many bird islands are found.

Similarity of Catholic and Hawaiian religions. Following closely Ellis' account of Paao and the latter's erroneous identification as a "white" priest, and depending on a converted native's account of Hawaiian religion, Yzendoorn decided that Paao was a Catholic priest, or perhaps a friar, and of course Spanish. Similarities in Catholic and Hawaiian ritual were cited.

For comparisons with Hawaiian religion, Yzendoorn used references to a so-called Hawaiian history by Kepelino, who was born about 1830 (eleven years after the native religion's overthrow) and was placed in the Catholic school about 1840 to be trained as a teacher. He became known locally for the ardency of his Catholicism. In the Hawaiian text of the history attributed to him, he says in effect that he has "reconciled" the conflicting accounts in Hawaiian history with the true religion!

This part of Yzendoorn's theory, while not convincing on his presentation, nevertheless must remain inconclusive because we

have so little accurate information on ancient Hawaiian religion, although that which we do have is difficult to reconcile with Christianity.

Alleged bust of Spanish gentleman. This stone figure is said to have been found in Manoa valley, Oahu, but on a date unrecorded. It is now in the Berlin museum. In 1881 Bastian [4] suggested its identification as early Spanish, as did Brigham [8] in 1896. Yzendoorn, however, is more specific, regarding it as "representing a European [Spanish] gentleman, whose circular ruff, pointed beard and standing mantelet collar are of the fashion which prevailed between 1580 and 1630" [53, pp. 13, 17].

On no point is this description correct. A cast of the bust (figures 13, 14) is in the Bishop Museum. The ruff, if such it be, or collarette does not encircle the neck and extends from the front no more than to a point near the ears, where it joins with the hair. No beard is indicated. The region of the nose and lips is so battered that it is not clear if a moustache or pouting lips were represented originally.

For hair, a wig was shaped, terminating in a short, stout queue which is tied and flanked by two tiers of horizontal rolls. The upper tier belongs to the wig, which the lower seemed to do when viewed from certain angles. However, probably it represents a coat collar. The portion immediately below is reduced roughly but symmetrically by cuttings with metal, and the rest of the block left unfinished. Hawaiian stone technique is in no way suggested.

The most definite characteristic, and that least noticed, is the hair-dressing. The style, as pointed out to the writer by the late Mrs. Zelia Nuttall, belongs to the period of Captain Cook. A brief study of the history of costume [32; 33; 36] will demonstrate that the ruff and the queue were a century apart, the ruff having become impractical on account of the long hair and periwig of the mid-seventeenth century. The queue and side rolls came in during the last half of the eighteenth century, earlier than which the bust, therefore, could not be dated. Were the so-called ruff regarded as a clumsy attempt to represent the neckerchief, then the bust could be accepted as a crude representation of some gentleman contemporary with Washington or Cook.

Possibly the bust was the work of one having a liking for



Figure 13—Front

Cast of stone figure found on Oahu erroneously identified as representing a Spaniard of the period 1580-1630. The ruff or collarette of the front view is not identifiable, but the hair-

Figure 14—Back

dressing or wig viewed from the back belongs definitely to the last half of the eighteenth century, earlier than which the figure cannot be dated. [Cast in Bishop Museum, original in Berlin.]

carving figure-heads of ships. In 1795 a number of white men were occupied on Oahu building schooners for Kamehameha.

The preceding does not exhaust the list of theories of Spanish discovery of these islands. Others remain, both noted and unnoted by Dahlgren, but their unimportance is such that they may be grouped together and dismissed as was the claim that Francisco de Gali was the discoverer in 1584—"an allegation" Dahlgren stated "which seems to have attracted no attention, and certainly deserves none." [12, p. 47].

Quimper, first Spanish explorer of Hawaii. In startling contrast with these claims of Hawaiian discovery by Spaniards, is their clear contradiction by the Spanish officer Quimper who, in 1791, was deputed to make a reconnaissance of these islands. Being attached to the service on the west coast of North America, he was probably a fellow-officer of Martinez and Tobar and undoubtedly knew of the discovery theory which was still current.

The viceroy had failed to endorse Martinez' plan, not on account of the idea but of the details of its execution. He still retained the Hawaiian taken from Colnett, and as Manning observed :

The Viceroy was attempting to keep this man, who was said to be a chief of one of the islands, ostensibly that he might be converted to the Catholic religion; but probably the real reason was to use him in getting an opening for a Spanish settlement on the Sandwich Islands. [26, p. 356]

In order to gain first-hand information of the islands, Quimper was despatched at the first opportunity, and instructed, among other things, to be kind to the natives and to make friends of them.

Quimper was well pleased with what he found :

These fertile isles, because of their situation almost halfway between California and the Island of Luzon, lying between 20° to 23° north latitude and 31° west longitude in the meridian of San Blas, would be one of the most precious properties of the Spanish nation for the productivity of the soil, healthy climate, and riches which could be developed with production of cane, coffee plants and wine.

This quotation demonstrates that Quimper was of a mind with Martinez and the viceroy as to the desirability of Spain's possessing the Hawaiian Islands. But he clearly disagreed with them on the point of the discoverer. This point he ignored in his report to his government [34], but when he published his account [35], the title was: "The Sandwich Islands . . . so named by their famous discoverer Captain Cook . . ." In the

introduction, Quimper speaks of himself as "being the first Spaniard to make this exploration;" and in the dedication, remarks "since the glory of its discovery already is owed to the admirable and prolix British nation."

On Oahu Quimper finds "the great bay of Quimper, so named because he was the first Spanish explorer to reach these precious and fertile islands," and later refers to the islands' "famous discoverer Cook."

The reiterations that Cook was the discoverer, and that Quimper was the first Spanish explorer to arrive show that he was diametrically opposed to the ideas of his fellow officers on the Gaytan-Mesa theory, although quite in accord with them in the matter of Spain occupying the islands. As a record of contemporary opinion within the Spanish naval circle, Quimper's remarks may serve to indicate that other officers did not share the views of Martinez and Tobar which, after all as implied above, seem to have been affected by the scheme for trade monopoly.

Summation. The important theories that the Spanish discovered the Hawaiian Islands have been considered in the order of their evolution. With certain exceptions, presently to be enumerated, they have been shown to be baseless.

In their representations the authors did not differentiate between the various applications of the term "discover," the primary meaning (as of unknown islands) "disclose or reveal" being given the same value as a secondary one of mere "sighting" by those assumed to have landed and settled. The separation is made below.

The exceptions referred to have been left undetermined, either for lack of information or on account of incomplete study. At the same time, standing by themselves, they can have but little value in the discussion. They are the identification of the iron breech-pin, origin of the helmet form, possible presence of a light-colored strain other than the 'ehu, and alleged similarities in religions, to which might be added the identifications of foreigners traditionally arriving in the pre-Cook era and regarded as "discoverers"—obviously in the secondary sense as defined above.

To conclude, as has been done, that all assumably foreign arrivals or influences necessarily must have been Spanish is very arbitrary and misleading. It is practically certain that some

Japanese castaways arrived in the early period and left an imprint on Hawaiian material culture, and a fairly good case could be made in attributing to them all recognizable foreign influence. In addition, British, Dutch, French and Portuguese vessels shared the Pacific Ocean with those of Spain, and in doing so the British and Dutch lost ships as well as the Spanish, and might have reached the islands in their small boats equally well.

Thus the chances of identifying the traditional foreigners as Spanish are very much reduced. Furthermore, if we accept the opinions of Fornander and of Alexander that Spanish influence left no traces in Hawaiian culture, religion, etc. the chances are practically eliminated.

As for the primary application of the term discover—the extensive researches conducted by Dahlgren, supplemented by the writer, show that: (1) no evidence of Spanish discovery of the Hawaiian Islands exists in the accounts and charts where it should be found; (2) the Spanish are not likely to have made the discovery because their ships' courses led away from and not to the islands; (3) although the islands would have been of great value to Spanish shipping, and the Spanish were seeking new lands, and subjects, and souls to save, the group remained unknown to Spain until revealed through Cook's voyages; (4) as soon as the value and possibilities of the islands became known to the Spanish, their officials made recommendations and plans to occupy them under a fictitious claim of earlier discovery, and went so far as to conduct a reconnaissance; (5) the Spanish officer despatched for the purpose, while also eager for the occupation, was equally definite in denying the discovery by Spaniards and in attributing it to Cook.

In brief, Dahlgren's conclusion, that no historical evidence proves the discovery of the Hawaiian Islands by Spain, not only receives full support, but the evidence which is available virtually constitutes disproof.

APPENDIX I. *Spanish authority for the Gaytan-1555 theory*

Official translation of letter received by the Hawaiian Foreign Office from the Spanish Colonial Office, transmitted through the Governors of the Philippines and of Guam. (Official translations into English and into French in the Archives of Hawaii, filed under "Foreign, 1866".)

GOBIERNO SUP. CIVIL
DE FILIPINAS
SECRETARIA

Colonial Office, No. 64.

Sir.—

The Marine Department communicated to this office on the 28th January, instant, that which follows. As there do not exist in the Archives of this Office any records whatever bearing dates previous to the year 1784, when all those of dates anterior to it were transmitted to the Archives of Simancas, the Royal Order of the 4th instant, communicated by your Excellency to this office, was referred to the Hydrographical Department, for obtaining particulars respecting the Discovery of the Hawaiianas or Sandwich Islands, in order to ascertain whether there were to be found records that could elucidate in any way the date of that Discovery, and the name of the Discoverer. On the 25th instant the Chief of that Department replied as follows:

"Sir,—In fulfilment of the Royal Order dated the 7th instant, for the purpose of ascertaining the historical information extant in this Office regarding the discovery of the Hawaiianas or Sandwich Islands, I have the honor to send to Y. E. the result of the investigations made with the diligence recommended to me in that Royal Order. By all the Documents that have been examined, it is demonstrated that that Discovery dates from the year 1555, or 223 years before Captain Cook surveyed those islands; and that the Discoverer was Juan Gaetano or Gaytan, who gave names to the principal Islands of that Archipelago. It is true that no document has been found in which Gaytan himself certifies to this fact, but there exist data which collectively form a series of proofs sufficient for believing it to be so. The principal one is an old manuscript chart, registered in these Archives as anonymous, and in which the Sandwich Islands are laid down under that name, but which also contains a note declaring the name of the Discoverer and date of the Discovery, and that he called them 'Isla de Mesa' (Table Islands). There are, besides, other Islands, situated in the same latitude, but 10° farther East, and respectively named 'La Mesa' (the table) : 'La Desgraciado' (the unfortunate); 'Olloa,' or 'Los Monges' (the Monks). The Chart appears to be a copy of that called the Chart of the Spanish Galleon, existing long before the time of Cook, and which is referred to by all the National & Foreign Authors that have been consulted, such as the following:—'Batavian Geography, 2d Vol. of the Geographical Atlas of William Blaeu, Amsterdam, 1663.' In the first map, entitled America Nova Fabula, the neighboring Island, 'La Desgraciada,' and those of 'Los Monges,' are placed towards the 21st degree of North Latitude, and 120° West of the Meridian passing through the Island of Teneriffe. 'Geographical Atlas of D'Auville, published in 1761, and revised and improved in 1786 by Barbie du Bocage.' In the 2d Map, and in the Hemisphere of the Mappa Mundi, the islands 'Desgraciada,' 'Mesa,' 'Olloa,' and 'Los Monges,' are found in the 20° of North Latitude, and about 17° farther East than the 'Sandwich Group,' augmented by Barbie in this Chart. James Burney, in the Chronological History of the discoveries in the South Sea or Pacific Ocean, cites the Atlas of Ortelius, entitled 'Theatrum Orbis,' in which the same Islands are found, and placed nearly in the same position. 'Alexander Findlay's Directory for the navigation of the Pacific Ocean, edition of 1857.' In the second part of this work, page 1120, the Author expresses and recapitulates the ideas already brought forward respecting this matter by Mr. Flurien in his Description of Marchand's Voyage, and by Mr. Ellis in his Voyage around Hawaii; and conceives strong suspicions that the true discoverer must have been one of the Spanish Navigators of the 16th century, because of the Iron Articles found by Cook in those islands, one of them being a fragment of a wide sword.

whose existence there he could not satisfactorily account for. The Author most explicit in regard to these surmises is the said Fleurien, who, on the 422d page of the first volume, says, 'By taking from Captain Cook the barren honour of the first Discovery of the Sandwich Islands, I do not endeavour to diminish the glory he has so justly merited, &c.' and he continues on page 423, 'Lieutenant Roberts, who constructed the Chart of the third voyage of the English Navigator in which are traced his three voyages round the World and towards both Poles, has preserved the Mesa group of the Chart of the Spanish Galleon, and has placed it with its centre 19° E of Owhyhee, and in the parallel of the latter Island. He doubtless thought that by preserving the Group found by the Spaniards, none would dare dispute with the English the first Discovery of the Sandwich Islands. But Arrowsmith, in his General Chart of 1790, and in his Planisphere of 1794, sacrificing his *amour propre* to the evidence, only lays down one of the two groups. Since 1786 La Perouse desirous of ascertaining if such islands really existed to the Eastward of Sandwich, passed over in the same parallel, 300 leagues from East to West, and in the whole of this expanse he found neither group, island, nor any sign whatever of land; and did not doubt that the island of Owhyhee, with its arid mountain in the form of a table, was 'la Mesa' of the Spaniards; and he adds at page 125, 'In the Charts, at the foot of this Archipelago, might be written: "Sandwich Islands, surveyed in 1778 by Captain Cook, who named them, anciently discovered by the Spanish Navigators." Perfectly in accord with this opinion, and strengthening it by an evident proof, is the Log of the Corvettes 'Descubierta' & 'Atrevida,' on their voyage from Acapulco to Manilla, which manuscript is preserved in this office, and apropos to this case, states, at folio 25, "With a sea so heavy from N.W. & N., that while the rolling of the ship increased, and with it the irksome interruption of our internal duties, the speed decreased, with considerable delay to our voyage; scarcely by noon of the 20th could we consider ourselves to be at 72° in the Meridian of Owhyhee, about 55° Longitude and 13° Latitude; nevertheless we had not, according to our calculation, an error of less than 7° to the Eastward, which, considering the long log-line we made use of, and that that error ought not necessarily to be the maximum to which it should be circumscribed on the voyage, strongly supported the suspicion that the Sandwich Islands of Captain Cook were Los Monges Ullua &c of the Spanish Charts, discovered by Juan de Gaytan in 1555, and situated about 10° to the Eastward of the new position fixed upon by the English.' We thus see that the presumptive or circumstantial evidence as to the true Discoverer of the Sandwich Islands is indubitable; having on its side the opinions of distinguished men, among whom figure countrymen of Cook himself, men who prefer justice & reason to a vain national pride. The last observation to be considered is the difference in the dates given to the First Discovery. Foreign Authors say that it took place in 1542, in the expedition commanded by General Rui Lopez de Villalobo; while the Spanish Chronicles denote 1555. The latter date should be the more correct one, for Juan Gaytan wrote the narrative of the Voyage of 1542 and mentions nothing respecting those Islands, while he gives an account of Roca Partida (Split Rock), and Anublada (Cloudy Island), and of all those he discovered on that expedition. To complete and terminate therefore these investigations, there is only wanting the narrative of Gaytan corresponding to the voyage in which he made that Discovery; though in my opinion it is not required to make clear the truth of this fact."

I have the honor to transmit this to Y. E. by Royal Order, so that you may communicate the preceding information to the Government of

the Sandwich Islands, and as being consequent to Y. E. letter, No. 864, dated the 18th July ultimo. God guard Y. E. many years.

Madrid, 21st February 1865

SEIJAS

To H. E. the Superior Civil Governor of the Philippines.

It is a true copy JOSE FELIPE DEL PAN, Acting Colonial Secretary

Es traducion inglesa

Florencio Laenz de Vizmanos

APPENDIX II.

Detail, date and purpose of Anonymous Chart No. 1

Although really of little importance of itself, the influence of Anonymous Chart No. 1 has been so wide that time should be devoted to its examination with the view of ascertaining its date and purpose.

The chart appears to be large, because its reduction to three photographic prints, each about 9 by 11 inches in size, has brought some of the lettering down almost to invisibility. It is numbered 44 and carries neither title nor name of office or draftsman.

Its apparent original purpose was to plot the courses of the ship *Hercules** from Macao to Mexico in 1781 and 1784 and, as shown in a plain, titular panel in the upper right corner, to record certain geographical corrections at and near Formosa and on the American coast, made by a navigator or draftsman on the vessel according to her observations.

The inscription in the panel is small, much of it is cloudy and many words are abbreviated, despite which it has been transcribed successfully by Lt. Comdr. John P. Dix, U.S.N., who offers the translation into English, on the opposite page, as literal as the idioms of Spanish and English permit.

The range of the chart is from Macao in China to Acapulco in Mexico, and from latitude $4^{\circ} 10' N.$ to $41^{\circ} 10' N.$ The ocean width is modern (Cf. Tables I and II). The American coast is given in much detail from Point Trinidad to Acapulco,

* Other references [10, pp. 604-9] show that she was carrying freight from Macao to Mexico and Peru. While always classified as a *navío*, a full rigged, three-masted warship with three gun-decks, it seemed usual for the Spanish in these waters to employ their war-vessels as freighters, and vice-versa. Used also for exploring, she is shown on the chart as departing from the regular course, on her first voyage, to examine the mythical island of Doña María Lajara, plotted several degrees northward of Hawaii. On this subject, Burney [9a, III, 414] says that Colnett brought a Spanish chart to England showing the island "with a note specifying that it was discovered in 1781 by the Spanish ship Hercules, and that it was well inhabited."

Since this island was on old maps before 1678 [12, p. 93] and Portlock, La Perouse and Broughton, in the eighteenth century, and others in the nineteenth looked for it in vain [12, pp. 197-9], and in view of the incorrect notes on the anonymous charts discussed in this paper, it might seem that notes on Spanish charts should be regarded with great caution.

SOME REMARKS CONCERNING THIS CHART

The northern part of Formosa Island has been plotted on this map more to the south than given on other charts, following observations made on the second voyage when we passed between this coast and the three islands to the north of it. No mention is made on the charts, covering this section, of the islands which we saw on the first voyage in 28° [N.J., nor in the second in 26° [N.] (eastward of Formosa) here located in that latitude, and in longitude of 48 leagues established by the man-of-war—without furnishing any reasons for these last [positions]. If you run much to the north after having passed to the east some distance, like the first time, we recognized one [part] to the south and we passed it on the north.

According to observations made on the Hercules, the rock with the two peaks which the Spanish chart placed in $32^{\circ} 10'$ was determined to be in latitude $31^{\circ} 25'$ as on this chart.

All the coast of California and of New Spain is located on this chart $9^{\circ} 47'$ more to the east than given on the Spanish [chart] of Manila of the year '80, in accordance with the astronomical observation of Mr. Cache and some Spaniards who participated in the observation at the Mission and bay of San Jose at Cape San Lucas in the year 1769, and confirmed by the experiences of the two voyages of the Navio Hercules in the years '81 and '84. Guadalupe Island, which is on said coast in 29° , is placed on this [chart] $1^{\circ} 48'$ more distant than the location given in the before-mentioned Manila Chart.

and is fairly correct. The Asiatic coast-line extends from Macao to a latitude just north of Formosa and the rest is omitted. Japan is incorrectly represented as in the charts towards the end of the eighteenth century, in addition to which its coastline on the north and west is incomplete. The Philippines and Ladrones are represented fairly correctly, while in the central and southern portions are many scattered islands bearing names given by the Spaniards of the sixteenth century.

Except for the coasts of California and Mexico the chart much resembles those employed on the Manila—Acapulco run, of which Anson obtained a copy in 1743, and La Perouse another at Monterey in 1786. In the reproductions of both of these, the draftsmen widened the ocean by about 10° as a correction—which correction is also noted in the titular panel. La Perouse' acquisition, apparently, was a recent addition:

At Monterey I had procured a manuscript Spanish Chart of this ocean, which however differs but very little from that engraved under the direction of the editor of Anson's Voyage. And it may be asserted, that since the capture of the galleon from Manilla by that admiral, and even for the last two centuries, no advances have been made in the knowledge of this sea, except in consequence of the fortunate discovery of the Sand-

wich Islands; the Resolution and the Discovery being the only ships, except the Boussole and the Astrolabe, which, for 200 years, have quitted the track pursued by the galleons [23, p. 233].

With the exceptions noted, and allowing for the westward enlargement necessary to include Macao, Anonymous Chart No. 1 could well be described in these words of La Perouse.

It also contains many of the islands removed from the charts by La Perouse for the reason that they did not exist in the positions assigned to them. One of these removals was the Monges group, here represented by four islands carrying the names Monje, Mira and La Desgraciada, with the fourth island unnamed. None of them is named La Mesa.

The Hawaiian Islands are represented twice (figure 11). Under the group description "Islands discovered by Juan de Gaitan in the year 1555. Called Mesa"** their arrangement, outlines and spelling of names are reproduced from the chart of the world in the account of Cook's third voyage** [11, pl. I]. Their position, however, is a few degrees too far to the west. The name "Sandwich Islands" is absent. The second set is without names, and its cartographical position is nearly correct. Its arrangement and outlines resemble closely those added by La Perouse to his reproduction of his Spanish chart [23, pl. 67], from which it was probably copied.

The chart contains other corrections of island positions, the movement being about 2° to the east and $\frac{1}{2}^{\circ}$ to the north as with the Hawaiian Islands. One of these is dated 1796. The island Patrocinio is plotted as a discovery in 1799.

Longitude is referred to the zero-meridian of San Bernardino Strait, the eastern gateway of the inter-island passage to Manila. The scale, at the lower margin on the chart, is graduated in degrees and thirds, and parallel meridional lines are spaced regularly at 5° intervals. A subsidiary scale, graduated in 5° intervals, runs westward for 40° from the meridian of a point near Navidad, Mexico.† Two scales for latitude divide the chart into three portions. The graduations, however, are lengthened towards the north so that the space of 5° at the lower margin of the chart equals that of 4° at the top. The parallels of latitude

* *Islas descubiertas por Juan de Gaitan el Ano de 1555. llamadas de Mesa.*

** Such is indicated clearly by the repetition of minor errors appearing only in this chart.

† See note p. 110.

are not coordinated with the scales, but are spaced at regular intervals on the chart equal almost to 5° at the lower margin, from which they begin.

When land is indicated, the parallel lines are broken or omitted, except with the corrections.

Fourteen tracks of vessels are represented, seven eastward and seven westward. Partial differentiation is present in heavy or light lines, dashes or dots. Some are dated, and some not. Four are identified by inscription, three being eastward and one westward. Of these, all but one belong to the *Hercules*.

The eastern tracks run north-east until reaching the latitudes between 35° and 40° N. which they hold until within 15° of longitude from California, when they make for Lower California. For most of the way they may be distinguished on the chart, but in the latter part, through erasures, crowding and cloudiness of the photograph, several are untraceable.

Of this group, two pairs of tracks from Macao are indicated, each comprising a very light line and a medium line, with one of them identified with the *Hercules*. Perhaps she traveled in company. One line is inscribed "Course of the ship *Hercules* from Macao to Acapulco in 1781."* It passes south and east of Formosa, newly observes a number of islands 7° south of Japan, then detours from the usual course to examine the site of the mythical island Dona Maria Laxara 8° north of Hawaii. One of the two tracks reaches Acapulco after cruising up and down the coast of Lower California, and the other becomes lost.

The second pair passes between the China coast and Formosa, rounding the latter on the north and locating and sighting islands on the north and east as noted in the titular panel. The inscription on the track is not clear but seems to be: "Byr . . . del Hercules pa Lima año de 1784;" but nearby are islands marked: "Islands seen by the ship Hercules on her second voyage, year 1784."** The light line is lost, but the medium line ends at a port in Lower California near Cedros Island.

Eastward from Manila, three tracks are delineated. All are dated by the day's run—a feature absent from all the *Hercules'* tracks. One, in heavy line, leaves Manila on or about August 17, passes to the west and north of Luzon and to the north-west of

* Derrrota del navio Hercules de Macao a Acapulco en 1781.
** Ys Vistas pr el Nio Hercules en su 2º Viaje, año 1784.

the Ladrone Islands. The last observation was made near Acapulco on November 11.

The other two tracks leave by San Bernardino pass and continue through the northern Ladrones to America. One, which is marked in light dashes, made its first observation on August 22. It cannot be traced on the American coast, but probably ended at Acapulco late in November or early in December.

The other, in firm dashes, is identified as: "Course . . . Fernande el Magallanes from Manila to Acapulco in 1796 [?]."^{*} The first observation may be dated as August 14. On October 20, in $35^{\circ} 30'$ north latitude and 20° west of the American coast, the track divides, but the inscriptions on the branches are illegible. That on the south is plotted until near Acapulco (which was reached about November 20) although the dating ends on October 31. The northern branch, after November 5, is lost in the maze of tracks near lower California.^{**}

Of the seven westward tracks, four carry the daily dates, and one, in addition, the year-date. Except for one which detours to the Hawaiian islands, most of their courses are between 13° and 14° north latitude in a belt which sometimes is only half a degree wide. All those, dated by the day, depart from Acapulco for San Bernardino pass, commencing and ending their observations a few degrees from land. For possible identification, some of their dates and positions may be listed:

Track	First obs. off Acapulco	Meridian of Hawaii	At or near Guam	Last obs. off San Bernardino
1. Dotted	Dec. 20, 1791	Jan. 20, 1792	Feb. 10, 1792	
2. Firm dashes	March 11	April 18	May 23	June 2
3. Heavy line	March 5	April 2	May 1	May 9
4. Light line	March 11	April 8	April 29	May 8

The first of these was plotted only as far as the Ladrone Islands on February 10, although the intervals were not filled in

^{*} Derrota . . . Fernande el Magallanes en su Pasage de Manila a Acapulco en 1796(?)

^{**} Official references [10, pp. 675-690] classify the *Magallanes* as a *nao*, a term applied to the Manila galleons. At San Blas on May 15, 1796, Andres de Salazar reports "of his voyage to Manila, escorting the *Magallanes*, and of his return to San Blas." Bancroft [3] refers to her as a "large warship," and "full rigged ship of war" from Manila commanded by Espinosa and calling in at Santa Barbara on December 17, 1797. In January 31, 1798 she is at Acapulco loading for Manila, but her sailing is delayed until 1799 [10, pp. 687-9]. Other sailings recorded were in 1805 and 1808. Unless two vessels named *Magallanes* were on the same coasts at the same time, the date of the track was 1795 probably because the galleons seldom if ever crossed the ocean twice in the same year. (cf. next note).

after January 10. Malaspina, commanding the *Descubierta* and *Atrevida* expedition left Mexico in December, 1791, and, according to the quotation in the Spanish official letter, was in the meridian of Hawaii in 13° north latitude on the 20th of the month, obviously of January. The date and position accord perfectly with those on the chart.

The second track, being of firm dashes, should be that of the *Magallanes* which has already been discussed in connection with its eastward voyage. After leaving the Manila course for the detour to Hawaii, it reached the latitude of 19° 30' and then, approaching the site of the Monges group between 19° and 20° N., avoided it by bearing well to the south, later resuming the course at 19° 10' N.* At this latitude Hawaii Island** was reached on April 18, and after rounding South Point, the observation of April 19 was taken near Kealakekua Bay and the voyage continued westward. It rejoined the Manila track before reaching Guam.

For the identification of the third and fourth westerly tracks, information is not available.

Three undated tracks join the Acapulco-Manila run. One enters from the south and two (one of light dashes) begin together abruptly at a point 96° east of San Bernardino. The line of dashes ends at the pass, and the others become lost in the crowding. However, just before reaching Guam, a track leaves the Manila run for Macao, as does another at a point 5° more to the west. The first of these is inscribed: "Course of the ship *Hercules* year 1783 to Macao in China."† The second has no identification, nor has yet another undated track, namely, between Manila and Macao.

The chart in its present form is a composite by at least three draftsmen who, apparently, made their contributions several years apart. The first draftsman, who had a light touch and lettered with an easy flowing hand which must have been rapid, did most

* The detour past the site of the Monges group evidenced that the Spanish navigator believed in their existence and apparently avoided them as the menaces to navigation which their names indicated (cf. p. 69). Their non-existence had been demonstrated by Portlock and Dixon in 1786 (published in 1789) and by La Perouse (published in 1797). While the former works may not have been known to the Spanish, that of La Perouse would have reached them promptly in return for courtesies received. The date of the voyage then was between 1784 (publication of Cook's chart) and 1797.

** This call at Hawaii Island has escaped Hawaiian records except, possibly, a tradition heard in 1804 by Shaler (cf. p. 93).

† *Derrota del navio Hercules año de 1783 el pr a Macao en la China.*

of the work based on earlier charts with their many errors. His style is recognizable clearly on the Monges group, but not on either set of the Hawaiian Islands which, it is obvious, he did not insert. He probably plotted San Francisco Island in the position found on the older charts, but some subsequent erasure followed.

This draftsman delineated but did not inscribe the tracks of the *Hercules'* voyages in 1781 and 1784 between Macao and America and, in accordance with the observations then made, plotted certain islands and coast-lines on the north-west and east in new and assumably correct positions. Corrections indicated by duplication of islands in the middle and southern portion of the chart were made by a later draftsman.

The wording of the titular panel accords with the work of the first draftsman, an agreement which demonstrates that the original purpose of the chart was to record geographical changes due to observations on the *Hercules* and had nothing to do with the discovery of the Hawaiian Islands. The chart was made in 1784 or later, as established by the date of the second voyage.

The hand of the second draftsman is heavy and large, and to it may be attributed the delineation and inscription of the first set of Hawaiian Islands, and the insertion of Malaspina's track and the subsidiary scale of longitude. The association is very interesting in view of the present discussion. The scale ends at 40° in the meridian of the Monges group and begins near but not at the meridian of Navidad. It may be remembered that the expedition, of which Gaytan was part, left from a port now unknown but near Navidad.*

Malaspina's voyage was round the world, but on the chart, it is only plotted as far as the Ladrones—namely well past the Hawaiian Islands. But Malaspina was one of those who believed that the date of Gaytan's alleged discovery of the Hawaiian Islands was 1555 and that he had erroneously plotted them as the Monges group (Cf. p. 87). We may conclude then that the second draftsman was either Malaspina, or some one inspired by him, and that the date of the insertions was 1792 or later. In any case, the plotting of the islands could not have predated 1784

* The zero meridian runs through a bay or port in $18^{\circ} 50' N.$ named Calaguas or Glaguo, a little to the south-east of Navidad on the chart in question. On Anson's chart, the name is Salagua. It corresponds with the modern Manzanillo. It may have been the port from which the expedition departed—called Porto Santo by Gaytan and Puerto de Juan Gallego by his companion journalists.

because, as already shown, they were copied from Cook's chart which was published that year.

The third draftsman had a touch, in delineation, which was even lighter than that of the first. In lettering he used a stiff pen and printed with smaller characters and in more formal style. He relocated many islands, including those of Hawaii, and added others from older charts as well as new discoveries. He delineated most of the ships' tracks—apparently all those between Acapulco and Manila—and, for clarity apparently, inscribed those of the *Hercules* already present. The track past and through the Hawaiian Islands caused a momentary embarrassment because the way was blocked by the second draftsman's delineation of Hawaii Island (fig. 11). After an attempt to avoid the encumbrance by a south-westerly course along the shore, the track was carried serenely overland to the ocean beyond.

The date of the third draftsman's contribution is 1799 or later, because he notes the discovery of an island in that year. His object is not fully apparent, unless he were merely practicing cartography, and can have no bearing on the discovery of the Hawaiian Islands. At the same time, if the second and third draftsmen were permitted to litter up the work of the first, it is evident that even the original chart was not considered of importance by the hydrographic office.

Of the three important points offered in the official letter as proof that Gaytan discovered the Hawaiian Islands, two are statements, (1) that the anonymous chart included the name "Sandwich Islands" and (2) that La Mesa was the name of one of the Monges group. These, as shown, are incorrect and are sufficiently discussed on pp. 83 and 106.

The third is the implication that the anonymous chart existed long before Cook's time, being apparently a copy of the "Chart of the Spanish Galleon." This name was applied to that captured by Anson in 1743 and published in the account of his voyage after widening the ocean by about 10° , to conform to better measurements. Anonymous Chart No. 1 resembles it in many respects except that the western margin, instead of stopping at the meridian of San Bernardino, is extended to Macao.

Anson's capture, apparently was one of the charts used for the run between Acapulco and Manila by the Spanish, who prob-

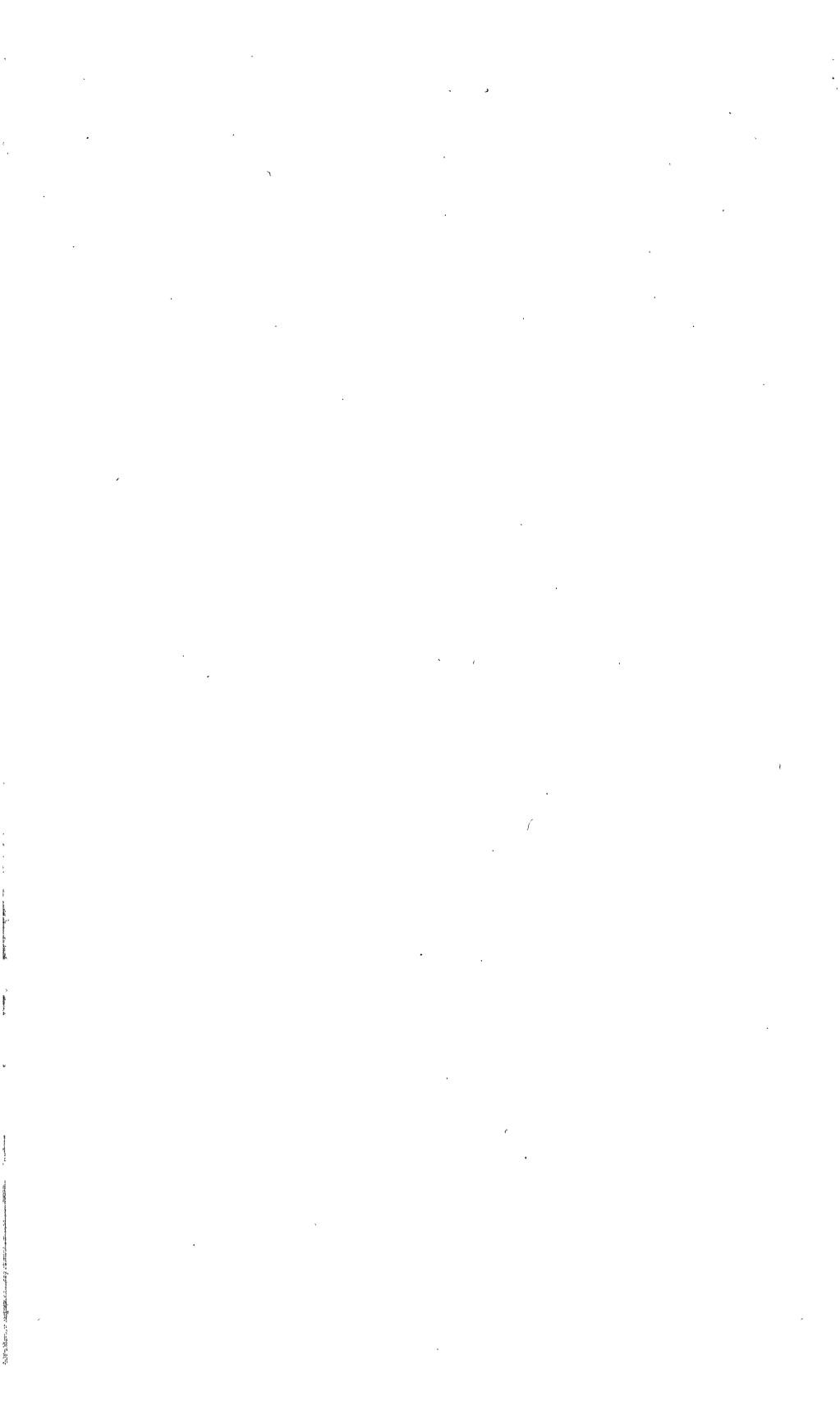
ably preferred the name "Manila Galleon Chart." But the use of these charts was not necessarily limited to the period long before Cook, since the work of the third draftsman and the official despatches [10, pp. 604-699] bring the record of such vessels into the nineteenth century. Independently of this, the anonymous chart, as already shown, was originally drawn not as a Manila Galleon Chart but to illustrate voyages from Macao. And the dates of its contributors' efforts are not prior to 1784, 1792 and 1799, namely, 5, 13 and 20 years respectively after Cook's death.

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